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A REVIEW OF THE MEDICAL CURRICULUM.

BY

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THE most difficult problem in the medical curriculum is the result of the growth in the medical sciences which has taken place during the thirty years of this century, for the medical student of 1930 is required to know much more than his predecessor of 1900. Physics and chemistry have expanded as a result of a series of progressive revolutions, and physiology has increased its territory. Relatively new branches of medical science, biochemistry and pathology, have so grown and developed that they claim a share of the student's time equal to that allotted to the older branches of biology, and psychology demands admission to the league of medical sciences.

During the clinical period the student's difficulties have been greatly increased by the progressive and inevitable tendency to specialization. New and highly technical methods of diagnosis have been devised, utilizing the *x* rays, the electrocardiograph, and applications of chemical and bacteriological methods. New forms of treatment have come into being, based on radium, different types of light, and systems of remedial gymnastics. New departments for the treatment of single diseases such as tuberculosis, or groups such as the venereal diseases, have appeared. The older-established special departments have intensified their demands on the student's attention. The time allotted to clerking and dressing may not be curtailed, but there are limits to the compass of the human mind, and the student may easily be distracted from the study of general medicine and general surgery by the diversity of the technical methods of diagnosis and treatment which have been elaborated in the special departments. Preparation for the Final Examination has not been made easier by the regulations of those qualifying bodies which require certificates of attendance at courses of instruction given in special departments.

The minimum period of study required by the General Medical Council is five years, although it was common knowledge before the war that at least six years were needed to obtain the medical degree of several English universities. In the last decade of the nineteenth century the student spent his first year in the acquirement of an elementary knowledge of chemistry, physics, and biology, the next two years in the departments of physiology and anatomy, and his last two years in the wards. But before the close of the century many intending medical students began the study of chemistry and physics at school. During the ten years which preceded the war the medical curriculum became more and more congested, and when the war ended it was obvious to everybody that something ought to be done. The General Medical Council reviewed the curriculum. In the presence of deans of medical faculties, of professors, and of other duly appointed representatives of the universities and medical schools of Great Britain and Ireland the five years "box" of the medical curriculum was opened, and its contents were examined. Within were found the numerous parts of the curriculum cut and shaped and arranged like the pieces of a Chinese puzzle so that they exactly fitted the box. The pieces were taken out, and each piece was handed to an appropriate committee to be reshaped, but, when the time came to reassemble the pieces of the puzzle, it was found that most of the pieces had got much larger, and all the pieces could not be got into the box.

The clinicians pointed out that of the minimum period of five years three had in the past been devoted to laboratory work and only two to work in the hospital; a minimum period of three years' clinical study subsequent to the examinations in anatomy and physiology was ordained. The two years allotted to anatomy and physiology could not be curtailed; what was to be done with chemistry and biology? It was clear that the period of medical study must be extended. On financial grounds an extension of the minimum period of medical study seemed inadvisable or inopportune, so it was camouflaged, and remained five years, but no boy was to be allowed to become a student until he had passed an examination in chemistry and physics. The first stage of the medical curriculum was relegated to the public and secondary schools. The change in this direction had begun, of course, long before the war, and many universities had permitted or encouraged intending students to prepare at school for the First M.B. Examination. But the General Medical Council made a distinct and far-reaching step when it required an examination in chemistry and physics as a preliminary condition to registration as a medical student.

To-day the work necessary for a medical degree or qualification falls into three periods or stages.

1. A period of about two years at a public or secondary school devoted to the study of chemistry, physics, and often biology.
2. A period of two years in the dissecting room and laboratories of a university or medical school.
3. A period of three years of clinical study in a hospital.

If allowance is made for failure at examinations or illness, the average period of study may be nearer eight than seven years. Are these years spent to the best possible advantage?

The School Period.

The General Medical Council does not enforce the registration of medical students, and each university or qualifying body is free to make its own regulations for the study of elementary chemistry, physics, and biology. It may include these subjects within its own curriculum, or permit or require candidates to pass examinations in these subjects before admission to the medical school. But unless the student has completed the prescribed courses in elementary chemistry, physics, and biology, or the greater part of

them, before he enters a university or medical school, he must be prepared to spend an extra year at the medical school. He must in a sense start a year behind the men of his year. A student who has completed chemistry and physics, but not biology, may be handicapped by time-table difficulties.

The position is emphasized at Oxford and Cambridge, where medical students have an opportunity of taking a degree with honours in natural science. For the examinations for these honour degrees there is a time limit of terms from matriculation, so that a student who has to devote his first year at the university to First M.B. subjects is handicapped a whole year in competition with men who are able to start preparation for an honours degree in their first term. In some cases students after leaving a public school spend a year at the medical school of a London hospital in order to pass the First M.B. Examinations of the University of Cambridge, and then proceed to Cambridge in the following year. Boys who intend to study medicine are usually advised to complete the work of the First M.B. or a similar examination before they enter a university or medical school; that under present conditions the advice is wise none can doubt.

One result is that the general education of the medical student stops at a very early age; while he is still very young he specializes on the science side of his school, and begins to cram for a series of pass examinations in elementary science. A boy of ability can pass an examination which entitles him to matriculate at a university or enter a medical school between his fifteenth and sixteenth birthday. In too many cases the passing of the matriculation examination means the end of general education. It may be argued that a boy who can pass one of these examinations has proved that he has had a good education. A boy who can just pass a university matriculation examination has attained a reasonable but not remarkable standard of general knowledge. But the point is that boys destined for professions other than medicine continue their general education for one, or two, or perhaps three years after they have passed a matriculation examination. The medical student loses two or three years, and the best years of his life at a public school, the years spent in the upper forms of the classical or modern side. There are still some who hold, as the author of this article holds, that a classical education—the discipline of the Greek and Latin tongue—is the best training for science, and for every other profession. But among those who will not go so far as this there may be some who will admit that a knowledge of literature and language, and the power to express thought clearly in speech and writing, are far from negligible assets to the scientist and the medical man. We are proud to think that we belong to a learned profession, and we have sanctioned a system which tends to put a premium on illiteracy.

On the other hand, it may be doubted whether the schoolboy gets good value for the last two years of his school life if he devotes them almost entirely to First M.B. subjects. It has been said often enough that natural science is better appreciated at the university than at the school age; under the aegis of a university department rather than in the form room of a public school. There may be something in this point of view, although it must be admitted that not all university teaching has the quality of inspiration, and science is excellently taught in many schools. But it is true that preparation for the First M.B. takes longer at school than it does at a university. Preparation for the First M.B. at school occupies about two years, and school terms are longer than university terms. A certain number of boys after two years of science at school are unable to pass the First M.B.; they have, however, done enough to become bored, and they have lost their interest in science.

One of the great difficulties which confront the schoolmaster is the fact that each university has a separate schedule and syllabus for its First M.B. Examination; this difficulty is marked in the case of biology. In the case of the matriculation examination universities accept one or other of the examinations conducted by the joint university examination boards, and the schoolmaster can choose one examination for all his pupils. It is difficult for a schoolmaster to prepare a number of boys in one class to meet the varied requirements of the First M.B. Examination of a number of universities. If boys are expected to pass the First M.B. from school, the universities should agree to form a joint examination board to provide a common First M.B. Examination.

There has been a tendency to raise the minimal age at which a student may be admitted to a university or medical school; nevertheless, we allow schoolboys, aged 15, to begin preparation for professional examinations. The study of natural science at school is one thing, the assimilation of knowledge with the immediate object of passing an examination is another. On the other hand, it has become very difficult for a boy to remain on the classical side of a public school until he is 18 or 19, and then begin the medical curriculum after he has matriculated at a university. Thirty years ago many students entered a laboratory for the first time in their first term at a medical school. To-day a boy who has postponed the commencement of science until he enters the university is at a great disadvantage as compared with his contemporaries, and must work very hard to catch up. It seems a pity that the choice of medicine as a career must be made so early. It is a serious matter if the medical profession is to lose recruits who have had the great advantage of a general and unspecialized education. If preparation for the First M.B. must be undertaken at school the syllabus of the examination should be so framed or cut down that the necessary work should not occupy more than the last year at school.

The Medical School.

The chief characteristic of the medical curriculum is the lack of co-ordination between the various subjects of which it is composed. The curriculum may be divided into three stages or strata: (1) the elementary study of physics, chemistry, zoology, and botany; (2) the more intensive study of human anatomy, and physiology; (3) the practical study of the recognition, prevention, and treatment of disease. Between these three principal strata are two huge clefts, and numerous subsidiary fissures divide the subjects included in each stratum.

The effective control of each subject remains with the professor or head of the department, but, as a general rule, professors of chemistry, physics, zoology, and botany are not medical men. The attitude of the professor of chemistry, for example, towards the faculty of medicine is perfectly clear, perfectly logical. From time to time, in one medical school after another, the medical faculty or one of its members, greatly daring, asks the professor of chemistry, "Could you manage to adapt your First M.B. course to the needs of the medical student?" The professor of chemistry replies, "Do you want your medical students taught chemistry, or do you not?" The answer is "Yes." "Very well," retorts the professor of chemistry (and who will blame him?), "I know what chemistry is and you do not; I settle the syllabus." In practice the conversations are more polite and protracted. The attitude of the professor of chemistry is not unreasonable, and it is not easy for the medical man to explain to the chemist the needs of the medical student.

Occasionally the professors of pure science are more complacent, and meet their colleagues of the faculty of medicine more than half-way. A professor of chemistry has said, "We teach the medical student the structural formulae of all the more important drugs." A professor of physics remarks: "I quite understand; you want the medical student to know about the physics of the x-ray coil." A professor of zoology proposed to include in his elementary course for medical students an account of the structure and life-history of parasites. These examples are quoted to show how difficult it is for non-medical teachers to understand the needs of the medical student. The technical applications of science must come later; the medical student in his first year needs the fundamental principles of the natural sciences. His labours are lightened when his teacher can abstain from examples which illustrate the applications of science to other trades and professions.

After the examinations in elementary science the student begins anatomy and physiology. The transition from the general biology of the zoology department to the stern realities of the dissecting room is abrupt and often unmitigated; there is room for correlation here. But the thing which every medical man remembers about anatomy is the number of hours which must be spent in the dissecting room, and the number of hours which must be spent before the required details can be committed to memory. To many, if not to all of us, who are not professional anatomists, it seems that the student is required to master details, some of which are essential neither to the concurrent study of physiology nor the subsequent comprehension of medicine and surgery. Certainly much of the anatomy which the student knows at the time of his examination is forgotten within the next three years, and much of that which is forgotten is never missed.

Anatomy is not, of course, the only subject which fades from the memory when the examination is passed, and it may be necessary to learn a great deal of anatomy in order that some may remain in the memory. But after a conference of anatomists with teachers of other subjects it might be possible to reduce the time spent on dissection, and on the acquirement of a knowledge of topographical anatomy. For the technical methods involved in the dissection of the various parts are essentially the same, and the mental processes involved are those which depend on a visual memory. After one or two parts have been dissected, further dissection brings no new experience to brain or fingers. If it is necessary that the whole body be dissected some remission of knowledge of detail may still be possible.

During the last thirty years medicine has been coming closer to physiology, and physiology has, on the whole, become less medical. During the nineteenth century the functions of organs in health were determined in many cases by observations made on hospital patients in whom these organs were diseased. Physiology in those days depended in part at least on observation, and not as yet entirely on experiment. The dependence of the study of the normal on the study of the abnormal was obvious; physiology had its origin in medicine and pathology.

Few branches of natural science have developed more rapidly during the last forty years than physiology, and this country has good reason to be proud of the great men who towards the close of the last, and at the beginning of the present, century, made English physiology famous throughout the world. In 1908 a well-known German chemist said to the author of this article, "physiology is really (*eigentlich*) an English science." The great development of physiology as a branch of experimental biology has affected the relation of physiology to medicine, and the attitude of physiologists to the medical student. Students destined for medicine, as they passed through the physiological laboratory, have been fascinated by the work which they saw in progress and have remained to become "unqualified" physiologists. Who will blame them? Medicine has been the loser. Physiology, emancipated from her "mother" Medicine, contracted closer alliances with chemistry, physics, and mathematics. The human body came to be regarded as a maze of semi-permeable membranes inhabited by electrolytes and colloids. Physiology moved towards chemistry and physics, and away from anatomy and zoology. The interest of physiologists in histology, and the relation of microscopic structure to function waned, and the gap between anatomy and physiology, between structure and function, widened. For the education of the medical student the correlation of anatomy and physiology can hardly be too close. Does the modern student look on the physiological laboratory as the place in which he studies the functions of the organs which he sees in the dissecting room?

On the other hand, advances made by physiologists in the first quarter of this century have been of great and direct value to the physician and the surgeon. The physician of to-day is probably more interested than his predecessor in the application of the methods of the physiological laboratory to the diagnosis of disease. Every branch of science must change its ground if it is to change its point of view. Change is necessary to progress, and there has been progress. But for the sake of the medical student who must learn many subjects within a relatively short period of years correlation of subjects is always an urgent necessity.

A reviewer of the history of medicine might point with justice to the development of chemical methods in the medical and biological sciences as one of the great events of the last thirty years. Etiology and diagnosis, prevention and treatment, have all benefited by the introduction of chemical methods. Nearly all critics of the medical curriculum insist on the urgent need of more instruction in chemical theories and methods. To-day the student is taught elementary inorganic chemistry at school; a short course of elementary organic chemistry is taken at school, or more often at the university. Organic chemistry is the subject of a special examination. A gap, more or less unbridged for the student, separates the organic chemistry of the department of chemistry from the physiological chemistry or biochemistry of the departments of physiology or biochemistry. At a late stage in the curriculum instruction is given in the chemical laboratories of some hospitals on chemical methods of diagnosis. Instruction in chemistry is imparted to the student in instalments. But the progress which has taken place in the knowledge of chemistry as applied to biology has resulted not so much in the correlation of the chemistry of living with the chemistry of non-living matter, as in a divorce of biochemistry from its intimate partnership with physiology, pathology, and medicine. Biochemistry, which started as chemical physiology, has become an independent branch of biology. Physiology, pathology, and medicine are not the only branches of biology which have problems which may be solved by chemical methods. Zoology, botany, and agriculture have chemical aspects and interests. Biochemistry is no longer a part of the department of physiology, but has become consulting chemist to all biological departments. How has the development of biochemistry affected the medical curriculum and the medical student? In this consolidation in one department of all the chemical interests of all branches of biology we may study some of the problems connected with the correlation of the subjects of the medical curriculum.

The medical curriculum has been regarded as divided into three periods or strata, after the fashion of a jam sandwich cake—the elementary science layer, the physiology and anatomy layer, and the hospital practice layer. There is chemistry in each layer. Now it is well known that the integrity of a cake must be destroyed by any method of section. But if the pieces are kept well together the appearance of a complete cake may be preserved. Difficulty in keeping the pieces together must arise when cutting in two planes is allowed. If the chemist or biochemist is permitted to cut out a slice, like a slice of plum cake, which contains the chemistry of all the three layers, the layers are going to suffer. It is difficult to teach physiology or pathology or medicine unless the chemical aspects of these subjects are treated as an integral part of these subjects. A man should not teach pathological chemistry unless he has a good knowledge of chemistry; it is equally true that he should have a good knowledge of pathology. The example of chemistry in its relation to biological subjects is instructive to the student of the medical curriculum, and illustrates the difficulties of the correlation of subjects.

The grand cañon of the curriculum separates anatomy and physiology from surgery and medicine, a vast gulf across which it has been the pathologist's ambition to build a bridge. The days have gone, no doubt, when the student on his arrival from Oxford or Cambridge at a London hospital was congratulated on his knowledge of science and advised to forget it as quickly as possible. Nevertheless the gap between the laboratory and the wards is still big, even though, to-day, willing hands are stretched out to help the student over. Medicine has never been quite certain whether she regarded herself as a science or an art, and her indecision is reflected in the curriculum. The M.B. course of a university starts as if the goal was a B.Sc. with honours in biology. The last years are devoted almost exclusively to clinical instruction of the most practical kind. The student is apt to regard all examinations

up to and including those in anatomy and physiology as a series of preliminary tests which must be passed before he is allowed to begin real work in a hospital. He has spent two years, perhaps, in the laboratories at a public school, and two years at a medical school; does he bring with him to the wards the equivalent of four years' experience and training in natural science? Attempts are made, it is true, to enable the student to make the best use of such knowledge as he may bring with him. Classes are given in some medical schools during the clinical years in applied physiology and anatomy. The medical and surgical units are essays in the combination of laboratory with clinical methods.

Of all the subjects of the medical curriculum pathology is best placed to help the student in the co-ordination of his experiences of normal and abnormal biology. Now Pathology, the youngest daughter, has made herself so useful that Mother Medicine has been very unwilling to allow her to grow up and become an independent science and have a house of her own. But Mother Medicine has kept Pathology at home with her in the hospital to look after the mortuary and the museum, and to cut sections and write reports on tumours. Later on, Pathology taught herself to prepare culture media, grow bacteria, make vaccines, and to perform chemical examinations. Pathology has been an extremely useful maid-of-all-work, and on winter evenings, after the work in the wards is done, the students, if they are not too tired, come to her that they may be told something of the laboratory methods by which certain diseases may be diagnosed or treated.

In the majority of the universities of Scotland and England a formal course of pathology occupies a portion of the student's time during the twelve months which follow the examinations in anatomy and physiology. These courses coincide with the first year of hospital work; they are over too soon, before the student is in a position to correlate medicine with pathology—the study of disease in the ward with the study of disease in the laboratory. The student is apt to regard pathology as the last of the long series of obstacles which he must surmount or evade before he is permitted to devote his attention to medicine.

In the London schools the time devoted to systematic instruction in pathology is less than in the North. In some hospitals an introductory course in general pathology and bacteriology is given during the first three months of clinical work. Courses, possibly slightly more ambitious, but of a very elementary and introductory character, are given at Oxford and Cambridge in order that medical students may have some notion of pathology before they migrate to a London hospital. Students, after they have begun clinical work in the wards, have little time and little opportunity for the study of pathology. Morbid anatomy can be learned in the post-mortem room. In some hospitals pathological clerkships in connexion with clinical laboratories afford chances of acquiring practical experience of useful diagnostic methods. Lectures are not always given during the same term, and often bear no relation to courses of practical instruction. There is too little co-ordination of the teaching of morbid anatomy with morbid histology, with bacteriology, and with chemical pathology. Pathology is presented to the student as a laboratory branch of diagnosis. The examinations in pathology which form part of the Final Examination in the London University, at Oxford, and at Cambridge are often regarded by the student as an additional examination in a special subject —as an added burden. The examination in pathology at Oxford is a part of the Final Examination, but may be taken as a separate part before the examination in the clinical subjects. There can be no other three subjects within the whole medical curriculum so nearly allied as medicine, surgery, and pathology, no other three subjects which offer such opportunities for co-ordinated teaching; to the student, then, pathology, medicine, and surgery should be one subject. Pathology is not an introductory science, nor is it a system of laboratory diagnosis to be learned at the completion of the usual period of clinical study; it is the study of disease by the methods of the laboratory, just as medicine and surgery are the study of pathology by the methods of the wards. It is desirable to begin the study of disease in the laboratory at least as early as it is begun in the wards, and laboratory study should be correlated with ward study throughout the clinical period.

It is neither within the scope of this article, nor within the powers of its author, to discuss details of clinical teaching. Practical instruction in medicine and surgery must be the backbone of the curriculum, and the product should be a man skilled in the prevention, diagnosis, and treatment of disease. This article is concerned with the branches of natural science, some understanding of which is essential to the study of medicine and surgery. But it appears that within the period of clinical study influences are at work similar to those which have been discussed in connexion with the period of laboratory study. There has been a comparable increase of knowledge, and a comparable tendency to specialization, with the splitting off of special departments concerned with certain diseases or groups of diseases, or with special methods of diagnosis or treatment. There is a tendency to insist on certificates of attendance at each special department, and demands are made from time to time for special papers on special subjects, and for appointment of special examiners. Taken by itself the case for each of these special subjects may appear incontrovertible. But if the claims of all the special subjects were admitted in full there would be little time within the three years' period of clinical study for general medicine and surgery.

In all medical schools lectures are given on forensic medicine, and on preventive medicine and hygiene; some universities insist on special examinations in these subjects. The standard of knowledge in forensic medicine which can be demanded of a medical student hardly seems to warrant the dignity of a special examiner and a special paper. From the nature of the subject practical instruction can only be fortuitous, and it does not seem necessary that the burden, admittedly a very temporary burden, of details derived from a textbook or lectures should be added to the student's heavy pack. The importance of preventive medicine is beyond dispute. But the prevention of disease is the concern of every teacher of medicine, surgery, and pathology; it does not seem reasonable to isolate the prevention of a disease from its etiology, diagnosis, and treatment. If the lecturers on medicine, surgery, and pathology fail to deal with the prevention of diseases on which they lecture, they must fail to do justice to the subjects committed to their charge. Candidates should be, and in fact are, examined in preventive medicine by examiners in medicine, surgery, and pathology, and there is no need for a special examination in this subject.

The object of the medical curriculum is to provide a training for medical men, the majority of whom will spend their lives in the practice of medicine and surgery. Training in the diagnosis and treatment of the sick is provided by the practice of a general hospital, and the problem of the medical curriculum is to provide the best possible foundation for clinical work. At Oxford and Cambridge students are encouraged to take advanced courses in natural science leading to a B.A. with honours, and at other universities exceptional students take additional courses in science and, at the expense of an extra year, secure the B.Sc. degree. A generous education in the natural sciences, and especially in one or more of the branches of biology, is the best possible preparation for the study of medicine. Men well grounded in the theories and methods of the natural sciences make the best recruits for the medical profession, and may be expected to provide pioneers, research workers, and teachers. There will always be a need for men of this type, and always work for them to do. But the bare minimum of professional knowledge and experience which every student must acquire before he passes a qualifying examination has increased and is increasing, and if the medical student is ambitious to reach the standard of an honours degree in pure science—the same standard as is required of a non-medical student of science who is unhampered by concurrent professional examinations—and satisfy all the requirements of the medical curriculum, he must be prepared for very strenuous work and a considerable addition to his years of training.

It is of the first importance for the future of the medical profession that facilities for advanced training in the natural sciences should be available for those medical students who are able to take advantage of them. It is important that every encouragement should be given to medical students to devote additional years to the study of science from an unspecialized and non-professional standpoint. From this point of view the less the connexion of the science which is studied with medicine the better. Men whose training before they enter medicine has been generously broad will bring new ideas with them into medicine. But not all medical students become research workers or teachers, and not a very large proportion of students have the inclination, time, or money for additional courses in science. A love of pure science for pure science's sake is not the only, and possibly not the most important, quality for success in general practice.

What should a man know before he is allowed to begin clinical work at hospital? It is desirable, but it is not essential, that he should be up to the standard of a B.Sc. with honours. In the case of the majority it would be unreasonable to suggest anything of the kind; but in practice we do require that every medical student shall take a series of courses and examinations in various branches of natural science which amount in all to about the standard of a pass B.Sc. The standard required is not high enough to ensure that the student is a good scientist, but it may well be much more than the amount of preliminary training necessary to make a good doctor. A hundred years ago or so it is believed that the sum total of all the natural sciences was so small that the larger minds then living could hold it all. At the end of the last century it was possible for a student to spend two or three years in the laboratories, and then two or three years at a hospital, and feel at the end of five or six years' study that he had covered a reasonable proportion of natural science and medical practice. To-day three hard years of work at a hospital are barely enough, if they are enough, for the acquirement of the essential minimum of clinical experience. The time may not be far distant when another year will be added to the period of clinical study. Before these three years must come two years of work in the dissecting rooms and the laboratories of a medical school, and from one to two years' work in the laboratories of a public or secondary school.

Does the student get full value or even a proper equivalent for the three or four or more years of laboratory work which he must do before he enters the wards? For the majority, for those who have neither the time, nor the ability, nor the wish to take full advantage of the advanced courses in natural science which universities provide, it would be a great advantage if the necessary minimum of compulsory preclinical laboratory work were substantially reduced. A reduction would involve a most careful consideration of the kind and amount of knowledge and experience which every student must possess before he is allowed to begin clinical work.

That the preclinical laboratory work of the curriculum is in urgent need of consideration and revision few will doubt. Definite expressions of opinion are needed from all responsible for teaching medical students and especially from those who teach during the period of hospital practice. From these opinions information could be obtained as to what might be included with advantage and what might be excluded from the curriculum without loss. In all probability the period of preliminary laboratory study might be reduced. Even if no reduction of time should be found possible, it seems almost certain that the time might be better spent, and the training in the laboratory better adapted to its object—the preparation of the medical student for the practice of medicine. The day has passed when the student could be allowed to browse at leisure for a few years on the pastures of pure science before he was harnessed in earnest to the chariot of Aesculapius. Above all there is need for co-operation between the teachers of the various subjects, and correlation of the subjects taught, so that the relation of the various subjects to one another should be obvious to the student. All the courses contained in the curriculum should be co-ordinated to form an ordered sequence. At present the student is required to attend classes and pass examinations in a number of apparently unrelated branches of science; he is given to understand that the assorted knowledge which he gains will be of value to him later on. In any case much of the value of the training is lost from the hurry, strain, and stress involved by the long series of examinations by which the student is harassed from an early age, and which rob him of much of the pleasure and profit which he might derive from a more leisured study of the natural sciences. The medical student is examined far too often, and in consequence more of his time is spent in cramming than in profitable study. One great advantage which would result from a shortening of the period of preliminary laboratory study would be an increase in the time available for general education. It is useless and almost scandalous to prescribe an age limit below which boys may not be registered as medical students, and at the same time make the passing of examinations in elementary science a necessary preliminary to registration so that schoolboys are in fact required or advised to begin professional study one or two years before they may be registered as students. It would be a distinct gain to medical education if no incentive was offered to schoolboys to work for professional examinations before their last year at school.

In any consideration of the laboratory work which the student does at the medical school, the arrangement of the laboratory subjects and their relation to clinical work in the time-table might receive some consideration. Is it essential or even really advisable to insist on the completion of the study of anatomy, physiology, and biochemistry before clinical work is begun? The student would take a far greater interest in anatomy and physiology if he had come in contact with patients in a hospital, and was in a position to appreciate for himself the importance and significance of these sciences. How much of the student's laboratory work should be preliminary to his admission to the wards? The correlation of medicine and surgery with anatomy, physiology, and pathology during the whole or the greater part of the five years of the curriculum would offer great opportunities to both teacher and student. The advice "Study this carefully and you will be rewarded by finding the knowledge very useful to you in a few years" is part of the regular stock-in-trade of the laboratory teacher in the faculty of medicine. There seems no valid reason why the study of morbid anatomy should be postponed until the study of normal anatomy has been certified as complete by examination. Some reference to disease, to pathology, and to medicine is essential to an understanding of physiology. The observation of changes produced by disease should be supplemented by the study of lesions produced by experiment. Could there be anything but gain if the teaching of normal physiology to medical students was continually illustrated by examples of abnormal structure and function shown in the wards and post-mortem room of a hospital? The most elementary course on metabolism, on biochemistry, or on physiological chemistry must be illustrated by the consideration of diseases of the ductless glands. Would the student take less interest in biochemistry if he was allowed to see living examples of deficiency diseases, or to obtain and examine for himself specimens from a case of diabetes? The opportunity for co-ordination of the subjects of the curriculum is great, and the need for active co-operation between teachers seems evident.

In conclusion, the author of this article is aware that it is presumption for any one individual to attempt a review of the whole curriculum and all its diverse and distracted elements. Of the errors of individual judgement this article must afford innumerable examples. On the medical curriculum, which spreads over so many years, and comprises so many and so different subjects, it is certain that individual teachers will hold and occasionally dare to express various and divergent views. All the greater is the need for the expression of individual opinions, imperfect and one-sided though they be, for consideration and for co-operation between all whose duty it is to share the great responsibility of training young men for the profession of medicine.

The Profession of Medicine.

INTRODUCTORY.

For many years it has been our custom to publish some weeks before the opening of the winter session a special Educational Number. The form and contents of this annual issue have undergone modifications from time to time, but its purpose has remained unchanged, and the seasoned medical reader must expect to find in it a great many facts and phrases with which he is only too familiar. The first object of the Educational Number is to give prospective students and their parents full information about the steps that must be taken and the studies that must be pursued in order to become a registered medical practitioner. The second object is to be of use to those wishing to know what a medical career has to offer, and to others who, having already chosen medicine as their life-work, or having entered upon it, are uncertain about the line of work for which they are best suited. The intention is to supply information rather than to offer advice; but, as in past years, this introductory article gives an opportunity of reviewing some aspects and tendencies of medical study and practice, in order to help those who think of becoming doctors to estimate their fitness for the calling and the prospects it holds out. At the present time medicine as a profession is undergoing great changes, which are viewed in very different lights by different observers. For this reason we shall keep as far as may be to facts, leaving the reader to decide for himself whether medicine is a desirable career to adopt, but directing attention to a few points which might not occur to anyone without some experience of the medical life.

Intending students will find in the pages that follow an account of the course of training required of them, the places where it can be obtained, and the universities and other licensing bodies which test the knowledge gained and confer degrees or diplomas entitling successful candidates to become legally qualified medical practitioners. Sections are included also on post-graduate medical study, on the higher qualifications, both general and special, and on the many and varied spheres of work open to registered medical men and women at home and abroad. The details given are founded on official information, and arranged along the customary lines.

Before proceeding further it may be well to repeat here, what has often been said before, that the aim of a medical education is to impart not only the essentials of medicine, but also the right principles and methods of adding to knowledge after qualification. Such teaching, to be effective, presupposes a good general education. Next in importance is a good scientific education—a thorough grounding in the basic principles of science. Upon these the student of ordinary intelligence and industry can build up an adequate technical equipment for the practice of his profession. An unfortunate tendency in studying the preliminary subjects is to acquire a mere "cram" knowledge, quickly forgotten after the particular examination is passed. These sciences interlock with each other and with the later subjects, and, properly approached, they give a drilling in exact methods and vigorous reasoning which will bear immediate fruit in the clinical part of the curriculum. Chemistry, physics, and elementary biology prepare the way for anatomy and physiology, and so for medicine and surgery and obstetrics. The curriculum is not perfect. It is undergoing revision continually, to keep pace with new knowledge and improvements in practice. But all authorities are agreed that these preliminary and intermediate sciences form the only appropriate introduction to the study of clinical medicine.

PORTALS OF THE PROFESSION.

The obvious goal of every student is the entry of his name in the *Medical Register*, which is the official statutory list of qualified medical practitioners kept by the General Medical Council. Those who are not acquainted with the system of medical teaching and examination in these islands, and with the history of our professional institutions, may well feel bewildered at the number and variety of ways in which admission can be obtained to the *Register*. They will see in the table of contents to this Educational Number that there are no fewer than twenty-seven bodies—eighteen universities and nine corporations—which either separately or jointly issue registrable qualifications; and the number of teaching institutions is even larger. Nevertheless, although we have no single State examination in medicine—no "one portal system," as it has been termed—the medical courses of the various universities and schools in Great Britain and Ireland run on parallel lines, and the obligatory curriculum is much the same for all students. As, however, the individual teaching and examining bodies have different standards and requirements, the choice should be made early, so that a definite plan may be followed.

If possible the decision to study for a university degree in medicine should be made by the time a boy or girl is 15. A matriculation examination or its equivalent should be attempted without delay, and the parent should ensure that the special requirements of the medical faculty of the selected university are fulfilled. As soon as this examination is disposed of work should be begun at school in the subjects of the First M.B. Few house-masters at public schools seem to be adequately informed about medical requirements under the revised curriculum, and it is doubtful if all schools are fully competent to meet the varying requirements of different authorities. Parents should therefore make inquiries on their own account in order that valuable time may not be wasted during the last year or two at school. This applies to all prospective medical students, but with special force to those seeking degrees at Oxford or Cambridge and desirous of getting the best out of the university.

All who wish to enter the profession must comply with certain conditions. These are regulated by the General Medical Council, which is a statutory body set up under the Medical Acts; a summary of its functions and requirements is given at page 351. Many changes have lately been made in the medical and pre-medical curriculum, and this section, as well as the article on Professional Study and Examination, should be studied with care. It is the business of the General Medical Council, so far as possible, to see that a suitable kind of training and the requisite degree of knowledge are secured to the student, and it is the business of the medical schools and examining bodies to give the training and test the knowledge in accordance with the requirements of that Council. Every student, after passing examinations in the subjects of general education and in the preliminary sciences of chemistry and physics, must take a course of training at a recognized medical school, covering a period of at least five years, but usually extended to six years or more.

Examination of candidates as to their fitness to practise medicine, surgery, and obstetrics is left to the licensing bodies, which are of two kinds—the universities, and certain medical corporations in England, Scotland, and Ireland. The requirements of these licensing bodies are summarized elsewhere under separate headings. One of the functions of the General Medical Council, besides that of keeping the *Medical Register* and maintaining discipline

within the profession, is to make sure that the tests at each stage do not fall below a certain standard, and that the students examined have undergone prescribed courses at approved institutions. Successful candidates eventually receive either degrees, in the case of a university, or diplomas or licences, in the case of a corporation; these qualifications entitle them to claim insertion of their names in the *Medical Register*. Every student, as soon as he obtains his qualification to practise, should at once register; otherwise he cannot hold a public medical appointment, or sign any certificate required from a legally qualified practitioner (such as a death certificate), or recover professional fees in a court of law.

Holders of diplomas and licences once made up the great majority of all medical men, especially in England and Wales. But universities have greatly multiplied during the present century, and so many practitioners are now graduates in medicine that a student at the threshold of his career will do well to consider the advantages of possessing a degree, though it may be desirable to take also a diploma or licence. The medical degrees (M.B., M.D., etc.) granted by the universities in Great Britain and Ireland are mentioned among the particulars about each university printed in later sections.

COST OF MEDICAL EDUCATION.

To those who have already decided to send their sons into the medical profession, no less than to those who are weighing the matter, a few words on the cost of medical education may prove helpful. For the ordinary student this resolves itself into the cost of the training at medical school and hospital, and the cost of living during the five or six years of the curriculum. The expenses under these two main headings vary considerably. Besides differences in the charges made for instruction, there are differences in examination fees, as well as in the fees for certificates of qualification, and those who seek the higher degrees and diplomas must expect to pay more for the additional courses and tests and certificates. Again, not all students, however industrious, have the knack of imparting what they know to an examiner, and every setback due to failure in the examination room or to illness means added expenses. School and examination fees, together with the cost of board, lodging, clothes, and recreation, form the largest items of expenditure, and to these must be added the money spent on books, microscope, instruments, and so forth.

Since professional education must in any case continue for five years at least (a period exceeded by the vast majority), and since the cost of living varies much in different parts of the country, while personal expenditure varies still more, it can only be said in a general way that anyone who thinks of entering the profession should be prepared for an outlay of at least £1,500. Something between two-thirds and three-quarters of the whole amount would probably be spent on maintenance, and the rest in fees, etc., for tuition and examination. The fees charged by the different schools and licensing bodies are stated in the paragraphs relating to each on other pages of this issue. When making an estimate of the probable outlay, the many helps available nowadays for the reduction of expense should not be ignored. At nearly all the medical schools more scholarships and money prizes are offered now than in the past; at the Scottish universities bursaries are numerous; and the Carnegie Trust (whose regulations are summarized at page 363) gives pecuniary help to many Scottish students. A first-class medical education, leading to the possession of a good medical degree, is probably to be obtained for a smaller outlay in the university cities of Scotland than anywhere in the south. The main thing to bear in mind when considering costs is that, as compared with other professions, the period of training in medicine is long, and for most students expensive. Further guidance on this matter will be found in a memorandum,[1] drawn up by the Registrar of the General Medical Council, on the procedure to be followed in order to enter the profession. This pamphlet gives much useful information, including a comparative table of the cost of study and examination at the various institutions.

Since medical students are not commonly the sons or daughters of wealthy parents, it is usual, before setting out upon this long and exacting course of study, to weigh, not only the cost, but also the prospects. An overcrowded curriculum would be hard to face if all that could be discerned at the end of it were an overcrowded profession. The youth and the girl of to-day, when reckoning up their chances in any calling, will wish to know the probable numbers of their competitors for the work that is waiting to be done.

THE NUMBERS OF MEDICAL STUDENTS.

The following brief survey should be read with the notes and tables printed at page 350 on the numbers of registered students and practitioners. More new students mean more new doctors five or six years later, though, as the chart shows, there is in normal times a fairly constant wastage.

At the close of the last century the annual entry of medical students in Great Britain and Ireland had been on the average about 1,800, and then for the next thirteen years it stood at about 1,400. During the war period, although many students left to serve with the forces, the entries grew steadily larger, so that in 1918 they were 2,253, and in the following year, when demobilization was in active progress, they were 3,420. In the next five years the numbers rapidly fell, but from 1923 to 1928 they remained at a fairly steady level rather below the immediate pre-war average. In 1924 the entries were 1,043; in 1925, 1,070; in 1926, 1,260; in 1927, 1,214; and in 1928, 1,362. Last year they rose again to 1,502.

The excessive entries during the post-war inflation period, if they had gone on long enough, must have led to overstocking of the profession. In the past decade the numbers of new practitioners registering each year have greatly exceeded the usual pre-war figure of eleven hundred or so. The large additions to the profession in recent years brought the total number of names in the *Medical Register* up to 54,870 at the end of 1929. This is upwards of ten thousand more than the figure for 1919, fourteen thousand more than that for 1909, and nineteen thousand more than that for 1899. The population of the British Isles has not increased at anything like that rate during the same decennial periods, and the ratio of doctors to inhabitants is therefore much higher now than ever before. It should be borne in mind, however, that the scope of medical practice has enlarged considerably in the meanwhile, and many fresh openings for professional work have followed advances in diagnostic, curative, and preventive methods, and the rapid development of administrative medicine. On the whole, it appears that the medical profession of this country is now large enough, but not yet overstocked.

AFTER REGISTRATION: CHOICE OF A CAREER.

The student, having passed all his tests and placed his name on the *Medical Register*, assumes the privileges and responsibilities that go with legal qualification. But after registration there is usually a period of transition between pupilage and established practice. This time may be put to the greatest advantage by serving as house-physician, house-surgeon, or casualty officer in a hospital, by working as assistant or locumtenent in private practice, or by seeing something of the world as a ship surgeon. As a preliminary to practice of whatever kind, a year or more spent in junior hospital appointments is a most profitable investment.

[1] *Memorandum on the Procedure to be Adopted by those who desire to enter the Profession of Medicine, with Notes on Costs and Prospects.* General Medical Council, 44, Hallam Street, Portland Place, W.1. Price 1s. post free.

If his mind is not made up already, the newly qualified practitioner has now to consider in which branch of the profession he can find a suitable outlet for his energies. The choice is very wide, though (as in many other affairs of life) the decision is often dictated rather by opportunity than by a nice balancing of tastes and talents. Among the great variety of paths open are general medical practice in town or country; Government service at home or abroad, including, of course, the medical branches of the Navy and Army and Air Force, and the I.M.S.; public health appointments and other administrative or official posts; institutional work, such as that of the municipal hospital, the mental hospital, the fever hospital, and the sanatorium; academic positions in the various schools of medicine; and special work in scientific research or in one of the many subdivisions of clinical medicine and surgery. Most of these careers are discussed in some detail in the later sections of this Educational Number, but a few words may be said here about general practice and the work of a consultant or specialist.

Further information about such matters will be found in the *Handbook for Recently Qualified Medical Practitioners*, published by the British Medical Association.[1] This comprises articles on openings for members of the profession; on practical aspects of medical work; on registration and the privileges of practitioners; on practice under the Insurance Acts; on post-graduation study and special diplomas; and on medical defence societies. The section dealing with practical aspects of medical work embodies much sound advice on professional conduct, on common medico-legal difficulties, and on the relations between doctor and patient and one doctor and another.

GENERAL PRACTICE.

It is estimated that three-quarters at least of those who pass out of the medical schools become "family doctors" sooner or later. The work is onerous and the pay too often inadequate; but it is a full life rich in human interest, and many of the very best students, now as formerly, choose general practice as a career. It is usually entered in one of three ways. The newcomer may take a house, put up a plate, and wait for work to come to him; he may buy the goodwill of a practice rendered vacant by retirement or death; or he may become a partner in an established firm. The first is considered more risky than the second, and the second than the third. A well-managed partnership of three or more has this advantage over single-handed practice, that it allows each partner leisure for recreation and for keeping up with the progress of medicine. Success in private practice demands a great deal of knowledge beyond that gained at the medical schools, and hence a man is more likely to be accepted as a partner, or to do well on his own account, if he has already some experience as an assistant or deputy. Those who begin their work as assistants seldom find cause to regret the time spent in learning the ropes under the eye of an experienced senior. As the circumstances of general practice vary much from place to place, it may be well to serve this "post-graduate apprenticeship" under conditions resembling those to be met later.

The general practitioner cannot hope to be an expert in every department of medicine, but he should have a more comprehensive outlook than the man whose life is devoted to perfecting himself in the technique and minutiae of one subject, to which he gives all his energy and time. Both types of workers are indispensable in these days: they are complementary. The good general practitioner possesses powers of perspective in disease that are denied to the specialist, and he must remain not only the most useful and encyclopaedic working unit of our profession, but also the member of it to whom, at least in the first instance, the public, for its own good, should apply for relief in sickness and guidance in maintaining health. The opportunities he has of seeing his patients repeatedly for minor ailments as well as for serious illnesses; his acquaintance with their idiosyncrasies, their family history, habits of life, and social circumstances; and many other personal details learnt only after long and confidential intercourse, make the "G.P.," of all medical men, the most important. In short, he has just that knowledge which enables him to treat the patient and not merely the disease.

The value of the work done by the family medical attendant is better appreciated now than in the past. In its recent Proposals for a General Medical Service for the Nation[1] the British Medical Association puts this matter in the forefront. It states as an axiom that "the medical service of the community must be based on the provision for every individual of a general practitioner or family doctor"; and the whole series of proposals rests on this as a fundamental principle. In regard to the prevention of disease, on which the Association lays great stress in its memorandum, the general practitioner has an increasingly important part to play. Unlike the doctor of yesterday, his time is not now wholly spent in treating developed disease in individuals. As knowledge accumulates he will come more and more to study early disorders of function and the preservation of bodily and mental health in varying circumstances. While this is all to the good, it cannot be denied that encroachments on private medical practice are perpetually being made under the auspices of the State or of the municipality or of voluntary bodies, and that official requirements and administrative checks imposed by public authorities tend to increase.

The national system of compulsory health insurance, now more than eighteen years old, has had a profound influence on general medical practice in this country. The Insurance Acts provide domiciliary medical attendance for some sixteen million persons, and more than 17,000 members of our profession undertake responsibility for the medical care of this vast section of the community. Thus the bulk of the general practitioners of the country now give, in large or small measure, medical attendance and treatment under a system embracing almost the whole working population. These practitioners, by placing their names on the panel (or medical list), signify their assent to the terms of service set out in the Medical Benefit Regulations and other relevant provisions. It would have been strange indeed if a measure so far-reaching and so complex had not brought about great changes in general practice, with some detriment to the freedom of the individual doctor. On the other hand, the panel system admittedly gives a better service than was provided under the old "club" arrangements, though it is by no means as complete or as effective as it might be made.

CONSULTANT AND SPECIALIST PRACTICE.

The term "consulting practice" comprises in ordinary usage the work of the general physician, that of the general surgical consultant or operating surgeon, and that of the gynaecologist and obstetrician. These are the three large divisions of consulting practice, as distinct from general practice, which, though they imply some restriction, yet call for a wide range of activity and outlook, in contrast with the smaller ambit of a "specialty" in the narrow sense. Of these main divisions the third is obviously the most limited, but on several grounds it can claim to rank as something larger and more comprehensive than the other specialties. It is impossible, however, to draw a sharp line between consulting practice and specialist practice. Most general consultants, whether medical or surgical, are specialists in some branch of their practice,

[1] *Handbook for Recently Qualified Medical Practitioners.* British Medical Association, Tavistock Square, W.C.1. (3s. 6d. net; post free 3s. 9d.)

[1] *Supplement to the British Medical Journal*, April 26th, 1930, pp. 165-182. The memorandum in its revised form is also issued as a separate document by the British Medical Association.

and most specialists are consultants in the sense that their work largely comes to them through the recommendation of general practitioners, with whom they act (or should act) in a consultative capacity. In any case, whoever holds himself out as one or the other, or both, must be assumed to have knowledge and skill above the ordinary.

The successful pursuit of a specialty is hard to achieve except by the aid of appointments to hospitals, particularly those with medical schools. These posts are much sought after, and the time of waiting for a vacancy may be long. It follows, then, that the would-be specialist, since he can scarcely hope at first to pay his way by the exercise of his specialty, must either have private sources of income or be prepared, by teaching or in other ways, to make ends meet. Competition in this branch of practice is very keen, as anyone can prove by counting the name-plates on the doors in the Harley Street area of London, or in corresponding parts of other large cities. Expenses are heavy, and the young consultant or specialist may have to go through a long period of training and waiting before he makes an income; but on the other hand success, when it comes, is liberally rewarded.

A comparatively new feature of medical life, especially in the larger industrial towns of the North of England, is the growing number of "general practitioner specialists," who combine ordinary panel practice with much surgical or other special work in well-equipped local hospitals which admit patients in different categories according to their means. Though the fees are small compared with those earned by operating surgeons and specialists in London, the work is by no means unremunerative.

Additional degrees and diplomas are important factors in securing election to the visiting staff of a large hospital, and a few remarks about them may be made here. Beyond the qualifications which admit to the *Medical Register*, most of the licensing bodies bestow higher titles after further tests. A considerable number of those who have graduated M.B. at a university, including many general practitioners, proceed later to the M.D. When applying for the post of physician to a hospital it is always useful, and may be obligatory, to hold also the Membership of one of the three Royal Colleges of Physicians, according to the part of the British Isles in which the hospital is situated. So, too, the Fellowship of one of the three Royal Colleges of Surgeons should be obtained by those seeking surgical appointments, and the degree of Master of Surgery is an added distinction. There are also diplomas in a growing number of special branches of work—such as public health, tropical medicine, ophthalmology, laryngology, radiology, tuberculosis, psychological medicine, and midwifery—which are superfluous for most practitioners, but may be useful or even indispensable for those who intend to devote themselves to one or other of these subjects. Information about the special diplomas open to qualified practitioners, and about higher degrees, will be found on other pages.

FINANCIAL AND SOCIAL ASPECTS.

The rewards of a profession come under two heads: those that depend on the intrinsic pleasure of the occupation, and those associated with financial success and material dignity. The pecuniary disadvantages of medicine are the long and costly training, the time of waiting after qualification before the practitioner can count upon an adequate income, and the heavy working expenses in proportion to gross earnings. On the other hand, it holds out the prospect of a fairly certain income, with unrivalled opportunities for exercise of the intellect in the service of others. There are many briefless barristers, but the qualified practitioner of medicine should never want for a livelihood so long as he keeps his health and his good name. But while no doctor who is willing and able to work need starve—which can scarcely be said of any other learned profession—those who think of adopting it as a career ought to understand that medicine is a path to fortune only for the few. Whatever the branch of work chosen, it is rare for a doctor to become what a business man would consider even moderately rich by the practice of his profession.

Yet if medicine, from the financial point of view, offers to most men little more than a means of livelihood always at command, in its social and cultural aspects the outlook is far brighter. As regards the satisfaction derived from the work itself a doctor's life need yield to none in the matter of sustained and varied interest. His lot is unlike that of many whose business gives little scope to the higher faculties, for he lives in, and by, the exercise of his intellectual powers. Moreover, the general culture which in past centuries belonged to the physician alone has spread into all ranks of the profession. The steady improvement in the education of the practitioner has added much to his influence with the public, and has been a large factor in raising his social status during the seventy years that have passed since the General Medical Council was constituted under the first Medical Act. Medicine gives to those who follow it an honourable position, and one whose dignity is gradually advancing with its progressive success in prevention and cure. The well-educated doctor stands high among his neighbours, and is the friend and confidant of his patients. Many men go further, and take a prominent part in the public life of their district. A proof of the all-round value of a medical training is the way in which it fits men for leadership.

PROFESSIONAL ORGANIZATION.

All who follow the calling of medicine, varied as their work may be, constitute a single brotherhood bound together by common interests and aims. The spirit of comradeship, which counts for so much in student days, should be preserved, both for its own sake and because no doctor can safely stand aside from his fellows. Individuals and isolated groups of practitioners are always at a disadvantage when they try to defend their interests against organized bodies, whether these are Government departments, local authorities, or commercial companies. In his daily work the doctor is well able to deal with the individual patient and the patient's friends, but he cannot stand up single-handed to outside organizations. But apart from motives of self-interest, every one of us owes a duty to our profession, and the doctor who holds aloof fails in that duty. Medical men and women must therefore band themselves together, and the first step after graduation should be to become an active member of the British Medical Association. Besides having behind him the machinery and the influence of a world-wide professional body, a young practitioner will find in the meetings of his local Division, and in the Annual Meetings of the Association, many opportunities for keeping abreast of new work and for friendly intercourse with colleagues. Another thing that no new graduate should fail to do is to join one of the societies which for a small yearly sum undertake individual legal defence of their members. The need for protection may arise out of the first case attended in hospital or in private practice.

The British Medical Association was founded in 1832 to promote the medical sciences and maintain the honour and interests of the profession; a brief note on its constitution and activities will be found at page 408. The Association, with Branches throughout the British Empire and a membership of more than 35,000, is the only body that can act for the profession as a whole and speak in its name. The record of ninety-eight years' work shows that vocational organization, wisely directed, can combine service for its members with service for the public; but much still remains to be done in both ways. Every medical man and woman should try to take a share in some of the movements, scientific or social or political, with which the Association has identified itself.

NUMBERS OF THE MEDICAL PROFESSION.

A REVIEW OF FIFTY YEARS.

IN order to present a general view of the numerical strength of the medical profession during the past half-century we have extracted from the records and set down below in parallel columns the total number of names in the *Medical Register* on December 31st of each year, and the numbers added annually by registration between 1880 and 1929.

Numerical State of the "Medical Register."

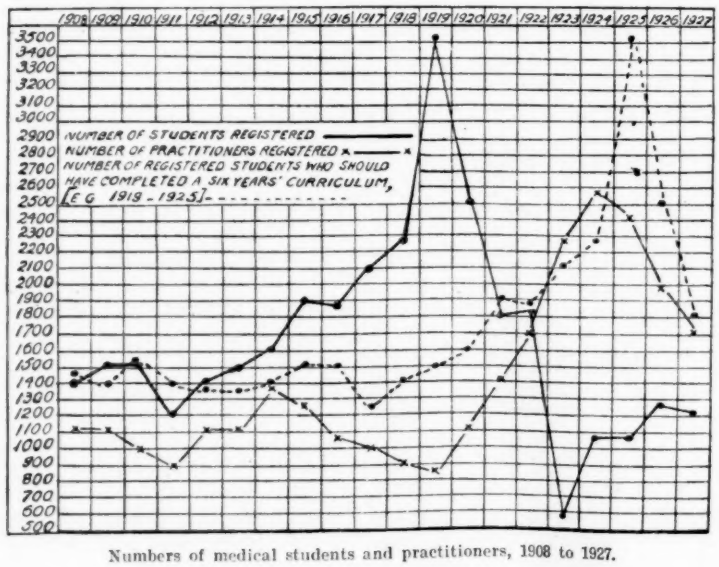
Year.	Names added in Year.	Total No. on Dec. 31.	Year.	Names added in Year.	Total No. on Dec. 31.
1880	1,123	22,936	1905	1,240	39,060
1881	1,053	23,275	1906	1,197	39,529
1882	1,171	23,801	1907	1,221	39,827
1883	1,304	24,517	1908	1,137	40,257
1884	1,388	25,321	1909	1,143	39,818
1885	1,377	25,998	1910	1,062	40,483
1886	1,431	26,452	1911	1,042	40,913
1887	1,531	27,246	1912	1,157	41,439
1888	1,184	27,939	1913	1,168	41,940
1889	1,305	28,348	1914	1,433	42,378
1890	1,266	29,163	1915	1,526	43,225
1891	1,345	29,555	1916	1,202	43,481
1892	1,513	30,590	1917	1,134	43,819
1893	1,579	31,644	1918	1,077	43,926
1894	1,426	32,637	1919	1,322	44,510
1895	1,446	33,601	1920	1,457	44,761
1896	1,385	34,478	1921	1,760	45,408
1897	1,230	34,642	1922	1,983	46,476
1898	1,210	35,057	1923	2,482	48,140
1899	1,351	35,836	1924	2,796	50,035
1900	1,345	36,355	1925	2,570	51,738
1901	1,318	36,912	1926	2,120	52,614
1902	1,275	37,232	1927	1,941	53,769
1903	1,233	37,878	1928	1,656	54,336
1904	1,168	38,492	1929	1,410	54,870

The varying proportion of registered medical practitioners to population during the period under review is shown in the following table. This sets out the total population of the British Isles at each decennial census since 1881, and the number of names on the *Register* in the same year; also the corresponding totals for the mid-census year 1926.

Proportion of Practitioners to Population.

Year.	Registered Practitioners.	Population, British Isles.
1881	23,275	35,241,482
1891	29,555	38,104,975
1901	36,912	41,976,827
1911	40,913	45,370,530
1921	45,408	47,146,506
1926	52,614	48,190,000

These figures show a steady increase in the ratio of doctors to population, which was accelerated during the years immediately following the war. The number of registered practitioners at the end of 1921 was nearly double the number at the end of 1881, but the population of Great Britain and Ireland within that period of forty years only increased by about 34 per cent. There is now considerably more than one name in the *Medical Register* to every thousand of population. In the United States of America it is estimated that there is one medical practitioner to every 753 people. Next to the United States the British Isles appear to have the highest proportion of practitioners to population. Austria has approximately one doctor to every 900 inhabitants; Switzerland 1 to 1,135; Denmark 1 to 1,200; Germany 1 to 1,320; France 1 to 1,470; Hungary 1 to 1,480; and Czechoslovakia 1 to 1,970.



Numbers of medical students and practitioners, 1908 to 1927.

REGISTRATION OF STUDENTS AND PRACTITIONERS.

The relation between the numbers of new students and those of newly qualified practitioners during recent years is shown in the accompanying chart, reproduced from the report of the Finance Committee of the General Medical Council for 1928.

The figures for the registration of practitioners year by year apply only to those whose names were entered on the British list, entries in the colonial and foreign lists of the *Medical Register* being excluded; hence the slight discrepancy between the totals indicated in this chart and those given in our tables printed above. The chart brings out in a striking way the difference between the number of registered students who should have completed a six years' curriculum in a given year and the number of newly qualified practitioners who in fact registered in that year. In 1919, following the armistice, there was an enormous entry of students; but a considerable proportion dropped out of the running year by year, and in 1925 the number of those who qualified fell short of expectation by nearly 1,000. Since then the two figures have approached each other again, and it is reasonable to suppose that the pre-war relationship between them will be resumed. Some further remarks on the numbers of medical students in recent years will be found in our introductory article on the profession of medicine.

PROFESSIONAL STUDY AND EXAMINATION.

THE MEDICAL CURRICULUM TO-DAY.

IN 1922 the General Medical Council prescribed a readjustment of the medical curriculum, to come into force at the beginning of the following year. The scheme adopted was in effect a compromise between several "schools of thought" which had been debating the matter for fifteen years or more. In this readjustment, among other things, increased emphasis was placed upon sufficient opportunity being afforded for the study, both theoretical and clinical, of those subjects which are now so essential in connexion with the treatment centres of a local authority, such as ophthalmology, venereal diseases, orthopaedics, ante-natal conditions, and infant welfare. Our article printed at page 351 on the functions and requirements of the General Medical Council includes the text of the resolutions and recommendations of the Council which have applied since the beginning of 1923. We summarize below the leading features of the revised scheme of professional study and examination, and indicate the importance attached by the Council to the preventive aspects of medicine. The first qualifying examinations based upon this readjusted curriculum were held in 1928.

The minimum age for registration as a medical student is now 17 years. There has been no formal lengthening of the medical curriculum under the revised scheme, but in practice it has been added to by transferring to preliminary study and examination the subjects of elementary physics and chemistry in their purely scientific aspects. Thus, in addition to passing a preliminary examination in general education, an examination (written, oral, and practical) in the elements of physics and chemistry is required by the General Medical Council before the admission of a name to the Students' Register. In the applications of these two subjects to the professional courses—as in biophysics,

biochemistry, and pharmacological chemistry—appropriate instruction is to continue throughout the curriculum, and is to be tested by examination, so that the student shall no longer be able to put behind him as past and done with the knowledge which he acquired as a preliminary. If he has had no facilities at school or otherwise for obtaining what is necessary for the preliminary or pre-registration examination in chemistry and physics, then he can come for it to the university or medical school, but study for this will not count as part of the medical curriculum. In elementary biology comparatively few secondary schools are equipped for tuition, but the General Medical Council has suggested an arrangement for utilizing the work of such schools as are qualified for the purpose. The examination in elementary biology will not be "pre-curriculum," but the instruction may be so, and a licensing body can allow students who so desire to sit for the examination immediately after matriculation. Here again, however, it is the wish of the Council that the applications of biology to medicine, surgery, and midwifery shall continue to receive adequate attention throughout the courses.

A Block System of Study.

Besides the resolutions of the General Medical Council in regard to professional education and examination printed elsewhere at page 353 a series of additional resolutions was adopted in 1922, as follows:

(*a*) That throughout the whole period of study the attention of the student should be directed by his teachers to the importance of the preventive aspects of medicine;

(*b*) That each licensing body should make adequate arrangements for the effective correlation of the several subjects of study throughout its curriculum;

(*c*) That the teaching of anatomy and physiology should include as a regular part of the courses the demonstration on the living human body of structure and function;

(*d*) That the curriculum should be so arranged that a minimum period of three years shall in every case be available for study after the completion by the student of the Professional Examinations in anatomy and physiology held at the close of the second year;

(*e*) That the curriculum should be so framed as to afford sufficient opportunities for the study, during the last three years of the course, of physics, chemistry, biology, anatomy, and physiology in their practical application to Medicine, Surgery, and Midwifery, and that the student's knowledge of these applications should be subject to test in the Final Examination;

(*f*) That before the student is admitted to his clinical appointments he should have received practical instruction in clinical methods and in the recognition and interpretation of physical signs;

(*g*) That instruction should be given, in the courses of Forensic Medicine and Public Health or otherwise, on the duties which devolve upon practitioners in their relation to the State, and on the generally recognized rules of medical ethics. Attention should be called to all *Notices* on these subjects issued by the General Medical Council.

The Council, it will be noted, attaches great importance to the reservation of sufficient time for the later subjects of study, free from all worries about passing the examinations of the earlier parts. To that end it recommends what is practically a block system. A minimum of three years should be available, not merely after the courses of anatomy and physiology have been taken, but after the examinations in these subjects have been passed.

Examination Reform.

Another notable feature is that in assessing marks in the several examinations account may be taken of "duly attested records of the work done by the candidate throughout his course of study" in the subject. This is an effort to meet the long felt difficulty that a man's mental agility, or the want of it, counts far too much in the examination room. The difficulty is real, but the remedy is not easy, and the Council has been wise in the cautious approach it makes towards a solution. Where, as in the examinations for the various conjoint diplomas, a student will only by chance come before his own teacher as an examiner, absolute impartiality in the attested records will be necessary. On the other hand, at the universities, where the teacher is almost always one of the examiners, no personal like or dislike of a student must influence the report of the internal to the external examiner. The class records should, of course, be available, but the scheme will put a serious ethical obligation on all concerned, and the Council will doubtless watch its operation with keen and critical interest.

Training in Preventive Medicine.

The first of the resolutions quoted above should be borne in mind by every teacher throughout the whole curriculum, and not merely in the clinical subjects. All the earlier subjects—physics, chemistry, biology, physiology, anatomy, and, of course, pathology, bacteriology, and therapeutics also—afford opportunities from the very beginning for instilling into the mind of the student the necessity for his keeping constantly in view, in all the advice and treatment he may give throughout his professional life, the primary importance of promoting the general health of those who entrust themselves to his care, and of preventing trivial ailments from developing into definite disease.

THE GENERAL MEDICAL COUNCIL.

THE General Medical Council was established by the Medical Act, 1858, in order "that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners." It consists of eighteen members appointed by the Universities in the United Kingdom having medical faculties; of nine members appointed by the Medical Corporations, such as the Royal Colleges of Physicians and Surgeons; of five members appointed by His Majesty in Council; and of six members directly elected by members of the profession as a whole—a total of thirty-eight. To these are added three dentists who are members of the Dental Board, and are appointed for dental business. Although the eighteen members appointed by the Universities and the five members appointed by His Majesty in Council may all be laymen, only one layman has so far been appointed, and that was by the Privy Council in 1926.

The Council's offices are at 44, Hallam Street, Portland Place, London, W.1, and it has Branch Offices at 12, Queen Street, Edinburgh, and 35, Dawson Street, Dublin.

The Council exists for the protection of the public and not of the profession. Its principal functions are three. First, to keep the *Medical Register*; second, to see that the name of no person is entered thereon as qualified unless he has had an adequate professional education, and to remove therefrom the names of qualified persons who are no longer entitled to public confidence; and third, to provide for the publication of the *British Pharmacopoeia*. It is the appearance of a name upon the *Medical Register*, and not the possession of a degree or diploma, that constitutes a person a duly or legally qualified practitioner of medicine.

The Council has no power to make rules in regard to the medical curriculum or examination, but it can pass resolutions and make recommendations relating thereto, and, if any of these were ignored by the licensing bodies, it would be open to the Council to make representations to the Privy Council, which, if it thought fit, might order that the qualifications obtained from such bodies should not be registrable.

The name of any medical practitioner who has been convicted of felony or misdemeanour, or who is proved before the Council itself to have been guilty of "infamous conduct in a professional respect," may be erased from the *Medical Register*.

The Medical Acts prohibit attempts being made to impose restriction as to any theory of medicine or surgery, and, once a practitioner has been trained and tested in the knowledge essential for public safety, he may adopt any "theory" of medicine or surgery in which he honestly believes. The Medical Acts do not prohibit the practice of medicine by unregistered persons, but if they "wilfully and falsely" assume any title implying registration they are liable to prosecution. In this respect the Medical Acts differ from the Midwives and the Dentists Acts, which

entirely preclude the practice of midwifery or dentistry by unregistered persons. Unregistered medical practitioners, however, are under certain disabilities, for they cannot recover charges for medical or surgical attendance, etc., in a court of law; they cannot hold an appointment as a medical officer in the Military or Naval Services, or on ships; they cannot give any valid certificate which is required by any Act from a medical practitioner—for example, certificate of death; and they cannot obtain dangerous drugs or attend cases of venereal disease.

An account of the recommendations that the Council has drawn up in respect of the education of medical students here follows.

Registration of Medical Students.

The Council recommends that every intending student of medicine should be registered as such at one of its three offices, whose addresses are given on page 353.

Candidates must produce evidence (*a*) that they have attained the age of 17 years; (*b*) that they have passed an examination in general education which is accepted for matriculation or entrance to the Faculties of Arts or Pure Science in a university in the United Kingdom; and in addition thereto that they have passed an examination in elementary chemistry and elementary physics conducted or recognized by one of the licensing bodies.

Application for registration should be addressed to the Registrar for the division of the United Kingdom in which the applicant is residing—England and Wales, or Scotland, or Ireland. It must be made on a special form, which can be obtained from one of the offices of the General Medical Council itself or from one of the various licensing bodies and medical schools.

The regulations with regard to registration apply equally to medical and dental students, with the exception that, in the case of the latter, pupilage with a registered dental practitioner may be regarded as a commencement of professional study, and that applications for registration should be addressed to the London office only.

Professional Education.

The rule is that it is only from the date which appears against his name in the *Students Register* that the medical student's career officially begins; thereafter five years at least must pass before he can present himself for the final examination for any diploma which entitles its lawful possessor to registration as a qualified medical practitioner under the Medical Acts; but to meet the circumstances brought about by the dates at which sessions of the medical schools begin and end, the close of the fifth year may be reckoned as occurring at the expiration of fifty-seven months from the date of registration. In any case, the period of five years must be one of bona-fide study; and in every course the following subjects should be included:

(i) Elements of General Biology, including an introduction to Embryology. This course, if the licensing bodies permit, may be taken before registration, and the examination may be passed immediately after registration.

(ii) Chemistry, Physics, and Biology in their application to Medicine.

(iii) Human Anatomy and Physiology, including Histology, Elements of Embryology, Biochemistry, and Biophysics.

(iv) Elementary Bacteriology, prior to regular clinical appointments.

(v) Pathology, general, special, and clinical, and Morbid Anatomy.

(vi) Pharmacology and Materia Medica, to be taken concurrently with clinical instruction.

(vii) Forensic Medicine, Hygiene, and Public Health.

(viii) Medicine, including Applied Anatomy and Physiology, Clinical Pathology and Therapeutics, Children's Diseases, Acute Infectious Diseases, Tuberculosis, Mental Diseases, Skin Diseases, and Vaccination.

(ix) Surgery, including Applied Anatomy and Physiology and Clinical Pathology, Anaesthetics, Diseases of the Eye, Ear, Throat, and Nose, Radiology, Venereal Diseases, and Orthopaedics.

(x) Midwifery and Diseases of Women, including ante-natal conditions and infant hygiene.

The Council recommends that during the last three of the five academic years clinical subjects shall be studied.

The first two years must be passed at a university, or at a school of medicine recognized by any of the licensing bodies enumerated in the schedule to the Medical Act of 1858, and the remainder must be devoted to clinical work at any public hospital or dispensary at home or abroad which is recognized by a licensing body.

Special Considerations.

The requirements of the General Medical Council in respect of the education of those who desire to enter the medical profession have now been given in outline, but before leaving this part of the subject the steps which the aspirant should take may be rehearsed in their due order:

(1) Pass an examination in arts;

(2) Pass an examination conducted or recognized by a licensing body in elementary physics and elementary chemistry;

(3) Having attained the age of 17, enter himself at a university or at a medical school recognized by one of the licensing bodies;

(4) Obtain registration as a medical student;

(5) Study for a minimum of five years certain prescribed subjects;

(6) Meanwhile pass sundry intermediate examinations; and at the end of the fifth year pass a "qualifying examination" which will entitle him to receive from a licensing body a legal authority to practise.

The Minimum Period.—It must be remembered that the period of five years is a minimum; more is often required even by the man of good abilities and reasonable industry, and some of the universities prescribe a longer period. Besides these qualities a student, to obtain a registrable qualification in the minimum period of five years, or fifty-seven months, must have a considerable amount of good luck; in other words, he must keep in good health through every term, and never fail at a single examination. Thus, for instance, before presenting himself for any examination he must be "signed up" for the subjects covered by that examination; this means that his teachers have to certify that he has diligently attended the required number of lectures or classes in the subjects in question. If, however, the student happens to be ill during the term when such lectures or classes are taking place he may miss enough of them to make it impossible for him to be signed up. Then, again, should he fail to satisfy the examiners at some examination, he cannot present himself for re-examination for at least three months. This generally entails further consequences, because, apart from the student's success at the next stage in his career being imperilled by the need for restudying the subjects in which he has failed, the Examining Boards usually insist upon a definite interval elapsing between one examination and the next. Further, many Boards have refused to recognize lectures and classes which have been attended before the student has passed the requisite examination in earlier subjects, and the Council now recommends that the professional examinations in anatomy and physiology be passed before the minimum period of three years' subsequent study be entered on; in other words, no clinical study should count as such until these examinations have been successfully completed. Failure at an examination may thus not only mean deferment of the date of examinations, but deferment of the beginning of the student's study of certain subjects. It is thus exceedingly easy for a student to fail to qualify in five years, and, as a fact, the majority of students take longer.

In speaking of the minimum period, it is to be remembered also that that time is only sufficient to gain a registrable qualification, such as a Bachelorship of Medicine or Surgery or the diplomas of the Royal Colleges. Those who wish to take a higher qualification—for instance, the F.R.C.S.Eng.—must prolong their work for another year or more. So, too, must in some cases those who desire to convert their Bachelorship into a Doctorate. This may entail further formal examination, but at some universities the M.D. is obtainable on presentation of a thesis when the Bachelor has attained a certain age and has practised for a certain number of years. However, a student's career proper may be considered, perhaps, to have ended when he obtains his first registrable qualification, for while preparing himself for any further tests he can, and usually does, hold some junior appointment which more or less covers his expenses.

MEMORANDUM ON STUDENTS' REGISTRATION.

The following memorandum has been drawn up by the Registrar of the General Medical Council as to the procedure for those who desire to be registered as medical or dental students.

The requirements for the registration of medical and dental students are the same, and every intending student should, in his own interest, register as soon as he commences his professional curriculum.

A recognized examination in general education must first be passed. If the student intends to obtain a university degree, he should apply to the university he selects for information as to its matriculation requirements in arts or pure science, or as to any examinations which may be accepted in fulfilment thereof. If the student intends to obtain a qualification from one of the licensing corporations (these are the Conjoint Boards in England, Scotland, and Ireland, the Society of Apothecaries of London, and the Apothecaries' Hall of Dublin), any of the examinations indicated below will be accepted. The subjects required are: (1) English, (2) Mathematics (elementary), (3) a language other than English, and (4) a fourth subject as required by the regulations of the particular examination, to be chosen from the following—namely, History, Geography, Botany, Physical Science, Natural Science, Latin, Greek, Hebrew, French, German, or other language accepted by a university for matriculation. School certificates (other than "Higher") must show "Credits" in each of the prescribed subjects. When school certificates with four credits are presented, or certificates from the Educational Institute of Scotland and College of Preceptors, the passes in the four subjects must be shown to have been obtained at not more than two sittings.

The requirements of the preliminary examination in general education being satisfied, it is then necessary for the student to pass a further or pre-registration examination (theoretical and practical) in elementary chemistry and elementary physics, which is conducted or recognized by one of the licensing bodies—that is, a university or licensing corporation. These subjects must be passed *in addition* to those included in the preliminary examination—for example, chemistry taken as one of the four required subjects in the preliminary examination cannot also count as one of the subjects of the pre-registration examination. These subjects may be studied at a university or medical school, or at a secondary school or other institution recognized by the body whose pre-registration examination it is intended to take. The student should, in every case, write beforehand to the body whose qualification he desires to obtain (a list will be found below) for information in regard to its requirements for this examination.

These two examinations (in general education and in physics and chemistry) having been passed and the student having attained the age of 17 years, he should apply to one of the universities or one of the medical schools for admission to its course of medical study. When medical study has been begun, he should apply to the Dean of the school, or to the Registrar of one of the branches of the General Medical Council, for a form of application for registration as a student, and should have it completed and sent in to one of the Branch Councils as soon as possible. There is no fee for this registration. The medical curriculum will extend for at least five years, and the dental curriculum for at least four years, from the date of registration as a student.

A student who has, before registration, studied the subject of elementary biology at an institution recognized by one of the licensing bodies may, if the body sees fit, be admitted to the professional examination in this subject immediately after his registration as a student. For information in regard to this he should apply to the body whose medical qualification he seeks.

A dental student may commence his curriculum, if he so desires, as a pupil in dental mechanics of a registered dental practitioner; but study at a dental school is to be preferred. If, however, he is apprenticed to a dental practitioner, he will have to devote twice as much time to instruction in dental mechanics as he would if he had taken this subject in a school. This will have the effect of lengthening the curriculum. In any case a student can only obtain a concession of twelve months out of the four years' curriculum.

The addresses of the Branch Registrars are:

General Medical Council, 44, Hallam Street, Portland Place, London, W.1.

Scottish Branch Council, 12, Queen Street, Edinburgh.

Irish Branch Council, 35, Dawson Street, Dublin.

Examining Bodies in Preliminary Education.

The following is a list of the officials of the examining bodies in preliminary education, with the names of the examinations in parentheses.

Registrar, Queen's University of Belfast. (Matriculation.) Assistant Secretary, Ministry of Education. (Senior Certificate.)
Registrar, The University, Bristol. (Matriculation, School Certificate, or Higher School Certificate.)
Registrary, The University, Cambridge. (Previous.)
Secretary, Cambridge Local Examinations, Syndicate Buildings, Cambridge. (School or Higher School Certificate.)
Medical Registrar, University of Dublin School of Physic, Dublin. (Junior Freshman, Special Preliminary, Junior Exhibition, or Examination for first, second, third, or fourth year in Arts.)
Registrar, University of Durham College of Medicine. Newcastle-on-Tyne. (Matriculation, School or Higher School Certificate.)
Registrar, Irish Conjoint Board, Royal College of Surgeons, Dublin. (Preliminary Examination.)
Registrar, National University of Ireland, Dublin. (Matriculation.)
The Assistant Commissioner of the Department of Education, 1, Hume Street, Dublin. (Senior Grade Examination or Leaving Certificate.)
Assistant Secretary, Ministry of Education, Belfast. (Senior Grade or Leaving Certificate.)
Academic Registrar, The University of London, South Kensington, London, S.W.7. (Matriculation, General, or Higher School Certificate.)
Secretary, Northern Universities Joint Matriculation Board, 315, Oxford Road, Manchester. (Matriculation, School, or Higher School Certificate.)
Registrar, University Registry, Oxford. (Responsions.)
Secretary, Oxford and Cambridge Schools Examination Board, Schools Examination Office, Balliol College, Oxford. (School or Higher School Certificate.)
Secretary, Oxford Local Examinations, University Press, Oxford. (School or Higher School Certificate.)
Secretary, College of Preceptors, Bloomsbury Square, London, W.C.2. (Senior Certificate.)
Secretary, Educational Institute of Scotland, 47, Moray Place, Edinburgh. (Preliminary Medical Certificate.)
Secretary, Scottish Education Department, 14, Queen Street, Edinburgh. (Leaving Certificate.)
Secretary, Scottish Universities Entrance Board, 81, North Street, St. Andrews. (Scottish Universities Entrance Examination.)
Registrar, University of Wales, Cathays Park, Cardiff. (Matriculation.)
Clerk, Central Welsh Board, Cardiff. (School or Higher School Certificate.)

[*Note.*—School Certificates other than "Higher" must show "Credits" in each of the prescribed subjects.]

Licensing Bodies.

The following is a list of the officials of licensing bodies and their addresses:

Secretary, English Conjoint Board, 8, Queen Square, Bloomsbury, W.C.1.
Clerk, Society of Apothecaries, Blackfriars, E.C.4.
Dean, Department of Medicine, Oxford.
Registrary, The University, Cambridge.
Registrar, University of Durham College of Medicine, Newcastle-on-Tyne.
Principal Officer, University of London, South Kensington, S.W.7.
Registrar, Victoria University, Manchester.
Registrar, The University, Birmingham.
Registrar, The University, Liverpool.
Registrar, The University, Leeds.
Registrar, The University, Sheffield.
Registrar, The University, Bristol.
Registrar, University of Wales, Cathays Park, Cardiff.
Secretary, Scottish Conjoint Board, 49, George Square, Edinburgh.
Dean of the Faculty of Medicine, The University, Edinburgh.
Registrar, The University, Glasgow.
Registrar, Royal Faculty of Physicians and Surgeons, Glasgow (*Dental*).
Secretary of the Medical Faculty, The University, Aberdeen.
Secretary, The University, St. Andrews.
Secretary, Irish Conjoint Board, Royal College of Surgeons, Dublin.
Registrar, Apothecaries' Hall of Ireland, 95, Merrion Square, Dublin.
Medical Registrar, The University, Trinity College, Dublin.
Registrar, National University of Ireland, University College, Dublin.
Secretary, Queen's University, Belfast.

Medical Schools.

The following is a list of medical schools (other than universities) and their officials:

Registrar, College of Medicine, Newcastle-on-Tyne.
Dean of the Medical College, St. Bartholomew's Hospital, London, E.C.1.
Dean of the Medical School, Charing Cross Hospital, W.C.2.
Dean of the Medical School, St. George's Hospital, S.W.1.
Dean of the Medical School, Guy's Hospital, S.E.1.
Dean of the Medical School, King's College, Strand, W.C.2.
Dean of the Medical School, King's College Hospital, S.E.5.
Dean of the Medical College, London Hospital, E.1.
Dean of the Medical School, St. Mary's Hospital, W.2.
Dean of the Medical School, Middlesex Hospital, W.1.
Dean of the Medical School, St. Thomas's Hospital, S.E.1.
Dean of the Medical School, University College Hospital, W.C.1.
Dean of the Medical School, Westminster Hospital, S.W.1.
Dean of the School of Medicine for Women, 8, Hunter Street, W.C.1.
*Registrar, University College, Aberystwyth.
*Registrar, University College, Bangor.
*Registrar, University College, Cardiff.
Dean of the Medical School, Welsh National School of Medicine, Cardiff.
Dean of the Medical School, University College, Swansea.
Dean of the Medical School, University College, Dundee.
Dean, School of Medicine of the Royal Colleges, Surgeons' Hall, Edinburgh.
Dean, St. Mungo's College, Glasgow.
Dean, Anderson's College of Medicine, Glasgow.
Mistress, Queen Margaret College, Glasgow.
Registrar, University College, Cork.
Registrar, University College, Dublin.
Secretary, School of Medicine, Royal College of Surgeons, Dublin.
Registrar, University College, Galway.

* First year only.

PROFESSIONAL EXAMINATION.

The Council's Recommendations.

The following recommendations of the General Medical Council in regard to professional examinations for medical and surgical qualifications were adopted in May, 1922:

1. In order to secure due continuity and sequence in medical study, two or more professional examinations in the earlier subjects should be held antecedently to the Final Examination in medicine, surgery, and midwifery.

2. Three years at least should intervene between the date of passing the professional examination in anatomy and physiology and that of admission to the Final Examination in medicine, surgery, and midwifery.

3. A candidate remitted in any subject of a professional examination should, before he is readmitted to examination therein, be required to produce satisfactory evidence that he has, during the interval of remission, pursued the study of the subject in which he was rejected. Candidates who obtain less than 30 per cent. of the marks in any subject should be remitted for a longer period than three months.

4. In all the professional examinations sufficient time should be assigned to practical work, in order to test the thoroughness of the candidate's knowledge and to encourage practical methods of study.

5. Candidates in all their examination work should be carefully supervised.

6. Two examiners should always participate in the oral examination of a candidate, except in subordinate parts of practical examinations.

7. In all written examinations the questions in each subject should be submitted for the approval of all the examiners in that subject.

8. In all written examinations an average of at least half an hour should be allowed for a candidate to answer each question.

9. It is desirable that examiners, and in particular those for the Final Examination in medicine, surgery, and midwifery, should be appointed or re-elected for at least three consecutive years.

10. Whatever may be the system of marking, the percentage for a pass in each subject should not be less than 50.

11. In the regulations for the several examinations it should be provided that examiners, in assessing marks, be empowered to take into account the duly attested records of the work done by the candidate throughout his course of study in the subject of the examination.

12. The Final Examination in medicine, surgery, and midwifery, with the exception of the clinical and practical examination in midwifery and gynaecology, must not be passed before the close of the fifth academic year of medical study.

13. The three portions of the Final Examination in medicine, surgery, and midwifery should not be further subdivided into sections which may be entered for or passed separately.

14. Compensation in respect of marks as between the three different portions of the Final or Qualifying Examination—namely, medicine, surgery, and midwifery—is contrary to the intention of the Medical Act (1886).

15. The Final Examination should include clinical and practical examinations in midwifery and gynaecology.

16. The clinical examination in medicine, surgery, and midwifery should be held in properly equipped hospitals or examination halls well provided with suitable patients.

17. In the examinations in clinical medicine at least one hour, and in clinical surgery at least half an hour, should be allowed to the candidate for the examination of, and report on, his principal case.

18. In medicine, in surgery, and in midwifery, no candidate should be allowed to pass who fails to obtain 50 per cent. of the aggregate marks assigned to the whole examination; or who fails to obtain 50 per cent. of the marks assigned to the clinical examination; or who fails to obtain 40 per cent. of the aggregate of the marks assigned to the written and oral examination. In midwifery, where a clinical examination is not held, the duly attested records of the work done by the candidate in clinical midwifery must be presented to the examiners for assessment in the Final Examination; and no candidate should be allowed to pass who fails to obtain 50 per cent. of the aggregate marks assigned to clinical and practical midwifery and gynaecology.

19. The Final Examination should include the examination of secretions, the testing of urine, clinical microscopy, and prescription writing, and there should always be an oral examination in medicine, surgery, and midwifery, which should include an examination on pathological specimens.

20. At the Final Examination each candidate should be submitted to a practical and oral examination in pathology (macroscopic and microscopic), unless this has been included in a professional examination preceding the Final Examination.

21. Whatever be the method of entry for the Final Examination all candidates should be required to complete the three portions of the Final Examination within a period of nineteen months.

This section of the Educational Number would be incomplete without brief mention of the memorandum, drawn up by the Registrar of the General Medical Council, on the procedure to be adopted by those who desire to enter the profession of medicine, to which reference is made in the introductory article at page 347. This pamphlet (price 1s. post free) sets out in plain language the information for which the Registrar is often asked by prospective medical students or their guardians.

Universities in England and Wales.

THERE are eleven universities in England and Wales, and some account of each of them follows. They all have now fully developed medical faculties.

UNIVERSITY OF OXFORD.

THE professional degrees conferred by this university are those of Bachelor of Medicine (B.M.), Bachelor of Surgery (B.Ch.), Doctor of Medicine (D.M.), and Master of Surgery (M.Ch.). It also grants a diploma in public health and a diploma in ophthalmology. On receiving the B.M. the candidate is entitled to registration by the General Medical Council. In favourable circumstances this degree and the B.Ch. may be obtained in six or seven years from matriculation. Before receiving either, the candidate must have taken a degree in arts (B.A.), for which three years' residence within the university is necessary. This, however, does not necessarily mean deferment of professional study for that period, for the subjects chosen for the arts course may be to a great extent the same as those in which examinations would in any case have to be passed for the medical degree, and the courses are dovetailed together.

In accordance with a statute which came into force on October 7th, 1920, women may be matriculated and admitted to degrees in the university. The statute is retrospective under certain conditions. Before matriculation a woman must have been admitted as a member of one of the five societies of women students (Lady Margaret Hall, Somerville College, St. Hugh's College, St. Hilda's Hall, or the Society of Oxford Home Students). Women members of the university are admitted to all degrees, except those in divinity, under the same conditions as those laid down for men in regard to examinations, courses of study, and fees, and under corresponding conditions as to residence at the university. Among the university diplomas open to women are those in anthropology, ophthalmology, and public health.

There are numerous avenues to the B.A. degree, but that which constitutes the *normal* course for medical students, as being the most closely related to their medical studies, is the following: By passing Responsions (or one of the examinations which are accepted as equivalent), the Scripture examination, some of the preliminary examinations in the Natural Science School,[1] in the first public examination; and one of the final honour examinations in the Final Honour School of Natural Science—physiology being that usually taken.

Responsions and the preliminary examinations in natural science may be passed before a candidate is a member of the university[2]; a Final Honour School may be taken at the end of the third or fourth academical year—that is, within nine or twelve terms respectively; the preliminary examinations of the Natural Science School may be taken as soon as Responsions has been passed or exemption obtained.

PROFESSIONAL DEGREES.

To obtain the B.M., B.Ch. degrees the candidate must first pass in four of the subjects of the preliminary examination of the Natural Science School—namely, physics, chemistry, zoology, and botany.

He then has two further examinations to pass—the First B.M. and the Second B.M. These take place twice a year, the first on the Thursday, the second on the Wednesday, of the eighth week of Michaelmas and Trinity terms. Every candidate at the first B.M. is examined in human anatomy, in physiology, and in organic chemistry, but is excused from physiology if he has obtained a first or second class in the Honour School of Physiology, and from organic chemistry if he has satisfied the examiners in Part I of the Honour School of Chemistry. Once he has passed this examination he can, on production of certain certificates, be examined as soon as he pleases in pathology, forensic medicine and hygiene, materia medica, and

[1] The four subjects of the medical preliminary examinations are four of the subjects in the natural science preliminary, and can be commenced directly after passing Responsions.

[2] Membership is constituted by Matriculation and by becoming either a member of a College or a Hall or a non-collegiate student.

pharmacology (subjects of the Second Examination), but cannot present himself for the remaining subjects—medicine, surgery, and midwifery—until the eighteenth term from the day of his matriculation *unless he be already a registered medical practitioner*, and not until a period of at least thirty-three months has elapsed from the date of his passing the First Examination, and he must pass in all the three subjects at one and the same time.

Before admission to the Second B.M. examination the student must produce certificates of instruction from a medical school recognized by the university, of having acted as clinical clerk and dresser, each for six months, and as post-mortem clerk for three months, of attendance on labours, of instruction in infectious and mental diseases and ophthalmology, and of proficiency in vaccination and the administration of anaesthetics,[1] and of three academic years of hospital attendance. He must also produce certificates of attendance in laboratory courses in pathology, bacteriology, and pharmacology, either in Oxford or in a recognized medical school.

D.M. AND M.CH. DEGREES.

A Bachelor of Medicine who wishes to proceed to the D.M. must have entered his thirtieth term and must present a dissertation for approval by the appointed examiners on a subject previously approved by the Regius Professor of Medicine. If a candidate for the M.Ch. he must have entered his twenty-first term and must pass an examination, which is held in June.

D.P.H. AND D.O.

Examinations for the diploma in public health have been suspended until further notice; that for the diploma in ophthalmology is held annually in March.

TEACHING.

The several colleges provide their undergraduate members with tutors for all examinations up to the B.A. degree. In addition, the university provides certain courses of instruction, including lectures, demonstrations, and practical work, which cover all the subjects of the Preliminary Examination and First B.M., and those of the Final Examination.

SCHOLARSHIPS.

Most colleges grant scholarships open to intending medical students of the maximum value of £100 a year, tenable for four years, in natural science, chemistry, physics, and biology. Exhibitions of varying value are also awarded in these subjects. At two colleges (University and Pembroke) there are medical entrance scholarships of £100 a year. Particulars can be obtained on application to the college tutors. Scholarships for women are also offered by the various women's colleges, from the principals of whom details of the examinations may be obtained. A Radcliffe Travelling Fellowship of £300 a year, tenable for two years, is conferred annually; candidates must have taken the B.M. degree. A Schorstein Research Fellowship of £200 a year for two years is awarded biennially. The Fellow must engage in research in one of the Medical Departments of the University. A George Herbert Hunt Travelling Scholarship of about £100 is awarded biennially to enable a young medical graduate to spend three months abroad in medical study. A Philip Walker Studentship in Pathology of £200 a year, tenable for two years, is awarded biennially for the encouragement of research in pathology, as also are the Rolleston Memorial Prize and the Radcliffe Prize (£50), for research in natural science (including pathology), and the three Theodore Williams Scholarships in Anatomy, Physiology, and Pathology, of the value of £50 each, tenable for two years. A Radcliffe Scholarship in Pharmacology of £50 for one year, open to the University, is awarded annually by the Master and Fellows of University College. A Burney Yeo King's College Hospital Scholarship of £80 is awarded annually.

FEES.

An annual fee of £4 10s. is paid to the university for the first four years, being reduced to £1 when the B.A. has been taken. For the degree the fees are: the B.A., £7 10s.; the B.M. and B.Ch., £14; the D.M., £25; the M.Ch., £12. College fees, varying in amount, are paid for the first four years of membership and in taking degrees. Tuition fees vary from £21 to £30. The minimum annual cost of living during the three university terms may be regarded as not less than £200, or for women not less than £140.

For further information application may be made to Dr. E. W. Ainley Walker, Dean of the School of Medicine, University of Oxford.

[1] For the certificates that will be required from candidates amenable to the new Regulations of the General Medical Council, see *Examination Statutes*, Clarendon Press, Oxford, 1930 edition.

UNIVERSITY OF CAMBRIDGE.

THE professional degrees given by this university are those of Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.Chir.), each of which entitles the possessor to admission to the *Register* by the General Medical Council, and the higher degrees of Doctor of Medicine and Master of Surgery. It also grants diplomas in tropical medicine and hygiene, in public health, in hygiene, and in medical radiology and electrology to medical practitioners, not necessarily graduates of the university. Information regarding these diplomas will be found in later sections under the headings Tropical Medicine, Public Health, and Radiology. A candidate for the M.B., B.Chir. degrees need not possess a degree in arts; it is sufficient if he has passed the Previous examination or some other examination accepted by the university as its equivalent. Most students, however, are advised to take the B.A. degree, preferably by obtaining honours in the Natural Sciences Tripos. The attainment of a sufficient standard in certain subjects in this Tripos will secure exemption from the corresponding tests in the First and Second M.B. examinations in the case of students who take up medical study late in their university career. Members of Girton College and Newnham College are admitted to the examinations.

PROFESSIONAL EXAMINATIONS.

To obtain the M.B. degree the candidate must pass three examinations and keep an Act. The B.Chir. degree (which is a registrable qualification) may be obtained after passing all three examinations.

First M.B.—This comprises (1) general and inorganic chemistry, (2) mechanics, (3) physics, (4) elementary biology. The parts may be taken together or separately. In either case the candidate, before admission to examination, must have passed or been exempted from the Previous Examination. Certain exemptions from the First M.B. Examination are allowed; the regulations may be obtained from the Registrary. The examination is held three times in the year.

Second M.B.—This examination comprises: Part I, organic chemistry; Part II, human anatomy and physiology; Part III, elementary pharmacology, including pharmaceutical chemistry and the elements of general pathology. No student is admitted to the first part of the Second Examination until he has completed the Previous Examination and the first part of the First Examination. No student is admitted to the second part of the Second Examination until he has passed all parts of the First Examination and has been matriculated. No student shall be admitted to the third part of the Second Examination until he has passed the first and second parts of the Second Examination. The candidate must present certificates of study in the subjects of the second and third parts. The examinations for Part I are held in October, December, and June, and for Part II in December and June; that for Part III in October and April.

Third M.B.—This is divided into two parts, to neither of which the candidate is admitted until he has passed the examinations previously mentioned. A candidate for the first part, which deals with the principles and practice of surgery (including special pathology) and midwifery and diseases peculiar to women, must have completed five years of medical study and be signed up in these subjects and have completed two years and a half of hospital practice. Before admission to the second part the candidate must have completed five years of medical study, and be duly signed up in all subjects and have completed three years of hospital practice. The examination is in the principles and practice of physic (including diseases of children, mental diseases, and medical jurisprudence), pathology (including hygiene and preventive medicine), and pharmacology (including therapeutics and toxicology). The Third M.B. examinations are held twice a year—in June and December.

Act for the M.B.—Before receiving his M.B. degree a candidate who has passed the Third M.B. examinations has to write a thesis. This he reads in public on an assigned day, and is then questioned concerning it and other subjects of medicine by the Regius Professor of

Physic. If approved at this test he is then certified as having "kept the Act," and in due course receives his degree. Medical degrees may be taken in absence by those living abroad, the candidate sending to the Registrar a dissertation, which is laid before the Degree Committee.

THE HIGHER DEGREES.

The M.D. degree may be taken by a Bachelor of Medicine of three years' standing (and a Master of Arts of four years' standing who has completed the course required for M.B.) after writing a thesis approved by the M.D. Degree Committee, and keeping a further Act, at which he reads his thesis and is examined thereon. Previously to the Act being kept a topic taken from the general subject of his thesis (whether it be physiology, pathology, pharmacology, practice of medicine, State medicine, or the history of medicine) is submitted to the candidate, on which he is required to write an extempore essay.

A candidate for the M.Chir. degree who is an M.A. may be admitted to the examination after he has become legally qualified to practise surgery. Other candidates may be admitted when two years have elapsed after they have passed the Third M.B. Examination. The examination comprises pathology, surgery, surgical anatomy, and surgical operations. The tests are partly in writing, partly oral, and partly practical: they include the writing of an extempore essay. Proposals are before the university whereby the examination will be held in February in each year.

FEES.

In addition to college fees, tutorial fees, and the expense of living, the following examination fees are payable: First M.B., £5 5s.; Second M.B., £6 6s.; Third M.B., £10 10s. For schedules referring to the examinations, lists of schools recognized by the university, and other information, application should be made to the University Registrary, Cambridge.

UNIVERSITY OF LONDON.

UNDER the regulations of the University of London the degrees obtainable in the Faculty of Medicine are those of Bachelor of Medicine and Bachelor of Surgery, Master of Surgery in four branches, Doctor of Medicine in six different branches, Bachelor of Dental Surgery, and Bachelor of Pharmacy. The university has its own matriculation examination, and it is very advisable that candidates should obtain and carefully study the booklets relating to it. The matriculation examination is open to any person, of either sex, who has attained the age of 16. It is held in January, June, and September, and lasts four days; the first two take place both in London and in certain provincial centres; the September examination is held in London only.

In no circumstances is a degree granted to anyone in less than three years after the date at which he passed the matriculation examination or obtained registration in some other way; and, unless they are already registered medical practitioners of a certain age and standing, all medical students must pass not less than five and a half years in professional study subsequent to matriculation, of which the last three years must be spent at a school of advanced medical studies.

PROFESSIONAL EXAMINATIONS.

M.B., B.S.—There are three examinations, the last two being subdivided. They are held twice a year.

The First Examination (held in July and December) covers inorganic chemistry, general biology, and physics, there being two papers, a practical test, and a possible oral test in each subject. The names of successful candidates are placed in alphabetical order with a note as to any subject in which a candidate has distinguished himself or herself.

The Second Examination is held in March and July. Part I covers organic chemistry, the candidate's knowledge being tested as in the earlier examination. Candidates for Part II must have passed the First Examination at least eighteen months previously, besides having completed Part I of the Second Examination. The subjects are anatomy, physiology, and pharmacology, the tests being written, oral, and practical. Candidates who fail in pharmacology may sit for re-examination in that subject alone if the examiners think fit, and candidates who pass in pharmacology only may similarly be credited with that subject.

No candidate, unless he is already a registered medical practitioner, is admitted to the Third M.B., B.S. Examination within three academic years from the date of his completing the Second Examination. The subjects are medicine (including mental diseases), pathology, forensic medicine and hygiene, surgery, and obstetrics and gynaecology. They may be divided into two groups, one comprising medicine, pathology, forensic medicine, and hygiene, and the other surgery and obstetrics and gynaecology. Either group may be taken first at the option of the candidate, or the groups may be taken together. Only candidates who show a competent knowledge of all the subjects comprising a group are passed. There is no separate examination held for honours, but the names of successful candidates are divided into an honours list and a pass list, and a university medal may be awarded the candidate who has most distinguished himself in the whole examination.

THE HIGHER DEGREES.

M.D.—An examination for the M.D. is held twice yearly—in December and July. Every candidate must have passed the examination for the M.B., B.S., unless he became M.B. before May, 1904. He may present himself for examination in any one of the following branches: (1) medicine, (2) pathology, (3) mental diseases and psychology, (4) midwifery and diseases of women, (5) State medicine, (6) tropical medicine, and, if he wishes, may pass also in another branch at a subsequent examination.

The period that must elapse between acquiring the M.B. and sitting for the M.D. in any branch varies between one and two years, according to the nature of the candidate's previous work, and in all cases evidence must be afforded of special study of the subject chosen; both written and practical examinations must be passed, though exemptions can be obtained from the former in exceptional circumstances. In each branch the scheme of examination is the same: two papers on its special subject, a paper on an allied subject—for example, medicine in the case of branch (4), pathology in branch (1)—an essay on one of two suggested topics connected with the special subject, and a clinical or other practical test. In any branch of the M.D. Examination a gold medal of the value of £20 may be awarded.

M.S.—The regulations with regard to the Mastership in Surgery are of a corresponding kind, but there are four branches in which it may be obtained—general surgery, dental surgery, ophthalmology, and laryngology, otology, and rhinology.

FEES.

For Matriculation: 2½ guineas for each entry. First Examination: 6 guineas for each entry to the whole examination. For re-examination in one subject the fee is 2 guineas. Second Examination, Part I: 3 guineas for the first and each subsequent entry. Second Examination, Part II: 9 guineas for each entry to the whole examination. For re-examination in one subject the fee is 4 guineas. M.B., B.S. Examination: 12 guineas for each entry to the whole examination, and 6 guineas for examination or re-examination in either group. M.D. and M.S. Examinations: 20 guineas, and 10 guineas on re-examination.

Inquiries should be addressed to the Academic Registrar, the University of London, South Kensington, S.W.7.

UNIVERSITY OF BIRMINGHAM.

THIS university confers medical and surgical degrees—namely, M.B., Ch.B., M.D., and Ch.M.—and also diplomas and degrees in State medicine and dentistry. The M.B., Ch.B. candidate may also combine with the earlier part of his medical curriculum courses leading to the ordinary B.Sc. degree in anatomy and physiology. The degree of B.Sc. with honours in one of these subjects requires an extra year. The full course of study for the degrees of M.B., Ch.B. extends over six years. The Senate has power to accept courses of study and examinations passed at other recognized universities as exempting from the examinations in physics, chemistry, biology, and organic chemistry. In the case of such students at least three years must be spent in attendance upon classes at the university. A degree of Ph.D. is also conferred for research

study in medicine under special regulations. Candidates must be graduates in medicine of a recognized university.

Students entering the Medical Faculty for the M.B., Ch.B. degrees must have passed—

(1) Either (*a*) the matriculation examination of the Joint Board of the Universities of Manchester, Liverpool, Leeds, Sheffield, and Birmingham; or (*b*) some other examination recognized as equivalent to the matriculation. Candidates for medical degrees are required to have passed in English literature and mathematics, and are recommended to take Latin and a science subject—chemistry or physics—at the matriculation examination. The matriculation examination of the Joint Board is held in July and September. The regulations and the list of examinations accepted in lieu thereof will be sent on application to the Secretary to the Board, Joint Matriculation Board, 315, Oxford Road, Manchester.

(2) A recognized pre-registration examination in the subjects of chemistry and physics—for example, the higher school certificate of the Joint Matriculation Board; or a candidate may attend first-year courses in the university, October to June, taking chemistry and physics, and biology.

PROFESSIONAL EXAMINATIONS.

The candidate for the M.B., Ch.B. degrees has five examinations to pass. In the Second (Part II) and Final examinations the candidate must pass in all the prescribed subjects or undergo the whole examination again.

The First M.B. deals with physics, chemistry, and biology. The Second M.B. (Part I) deals with organic chemistry. The Second M.B. (Part II) deals with anatomy and physiology, and the student must pass in both simultaneously. The Third M.B. deals with pathology and bacteriology. The Fourth M.B. takes place at the end of the fifth year, the subjects being forensic medicine, toxicology, public health, materia medica, pharmacology, and therapeutics.

Final M.B.—This comprises medicine, surgery, midwifery and diseases of women, ophthalmology, and mental diseases. The candidate, in addition to more ordinary certificates, must be prepared with a certificate of having acted as a post-mortem clerk for three months, and received special instruction in anaesthetics and clinical instruction in diseases peculiar to women, asylum ward work, ophthalmology, children's diseases, venereal diseases, ear and throat and skin diseases, etc. In respect to ophthalmology he must show that he has learnt refraction work. He also has to present to the examiners at the time of his examination a short written commentary on a gynaecological subject or case investigated during the period of gynaecological clerking.

M.D.—An ordinary candidate for this degree must be a M.B., Ch.B. of not less than one year's standing. He presents an original thesis for approval, and then passes a general examination in the principles and practice of medicine. From the latter the Board of Examiners may exempt a candidate whose thesis is of exceptional merit. The regulations respecting the Ch.M. are of the same general character. Subject to certain requirements as to special research or other post-graduate study, graduates of other universities may obtain the M.D. and Ch.M. in the same way as holders of the Birmingham M.B., Ch.B.

FEES.

The fee for Matriculation is £2 (payable to Joint Matriculation Board); £2 10s. for First M.B. Examination (if taken in university), and £2 10s. for each of the first four Professional Examinations; M.B., Ch.B. degree fee, £10; M.D. and Ch.M. Examinations, £12 10s. each. For further particulars application should be made to the Dean of the Medical Faculty, University of Birmingham.

UNIVERSITY OF BRISTOL.

IN the Faculty of Medicine the following degrees are conferred: Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), Bachelor of Dental Surgery (B.D.S.), and Master of Dental Surgery (M.D.S.). There are also the following diplomas: diploma in public health (D.P.H.), diploma in dental surgery (L.D.S.), and diploma in veterinary State medicine. All candidates for degrees in medicine, surgery, and dentistry are required to reach matriculation standard in the school certificate examination, or to pass such examination as may be regarded as equivalent by the Senate. All courses, degrees, and diplomas are open to men and women alike.

Conjoined Degrees of Bachelor of Medicine and Bachelor of Surgery.—Candidates must be not less than 21 years of age and have pursued the courses prescribed by university regulations during not less than five years after passing the First Examination in chemistry and physics, of which three shall have been spent in the university, and two of these three subsequent to passing the Second Examination. All candidates for the degrees of M.B., Ch.B. are required to satisfy the examiners in the several subjects of three examinations.

The First Examination.—The subjects of examination are: chemistry (inorganic), physics, and biology, the courses pursued being those for the time being approved for the intermediate part of the B.Sc. curriculum. This part of the curriculum shall extend over one year. (Candidates who have passed the higher school certificate approved by the Board of Education in these subjects will not be required to sit for the First Examination and will be regarded as having completed one year of study.)

The Second Examination.—The subjects of examination are: organic chemistry and elementary anatomy (Part I) and advanced anatomy and physiology (Part II).

The Final Examination.—The subjects of examination are: materia medica and pharmacy, pharmacology and therapeutics, general pathology, morbid anatomy, and bacteriology (Part I); special pathology, forensic medicine, toxicology, and public health, obstetrics (including diseases of women), surgery (systematic, clinical, practical, and operative, including ophthalmology and oto-rhino-laryngology), medicine (systematic, clinical, and practical, including mental diseases) (Part II). The subjects included in Part II may be taken in two groups—namely, Group I: surgery and obstetrics; Group II: medicine, public health, special pathology, forensic medicine, and toxicology. Candidates may pass Parts I and II together or separately, and the two groups of Part II may likewise be taken together or separately, but no student can obtain honours who elects to take the two groups of Part II separately. Forensic medicine and toxicology may be taken either with Part I or with Group II of Part II.

Degree of Doctor of Medicine.—Candidates must be Bachelors of the university of not less than two years' standing as such, and may elect either (1) to pass an examination in general medicine, or (2) to pass an examination in State medicine, or (3) to present a dissertation. The candidate who elects to pass the examination in State medicine must hold a diploma in public health of some university or college, and the candidate who elects to present a dissertation may be examined in the subject thereof.

Degree of Master of Surgery.—The degree may be taken in general surgery or in special subjects. Candidates shall be Bachelors of not less than two years' standing as such. For general surgery, they shall pass an examination in surgical anatomy, pathology, and bacteriology, and in operative, clinical, and general surgery, and shall present a dissertation. For special subjects—that is, ophthalmology or oto-rhino-laryngology or gynaecology—they shall, in addition to having studied and practised for two years the subject concerned, have held an approved appointment in it for not less than six months; they shall pass a written, oral, and clinical examination in the branch of surgery concerned, as well as in the anatomy, physiology, and pathology of the region of the body concerned (including, in the case of ophthalmology, physiological optics), and also a written examination in the principles of general surgery.

Diploma in Public Health.—Candidates must be at least 23 years of age, be fully registered medical practitioners of not less than two years' standing as such, and have passed the examination prescribed by regulation. The examination is divided into two parts.

UNIVERSITY OF DURHAM.

To its own undergraduates, who may be of either sex, this university grants the degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.), and Doctor of Medicine (M.D.), Master of Surgery and Doctor of Surgery (M.S. and D.Ch.), Bachelor of Hygiene, Doctor of Hygiene, and Bachelor of Dental Surgery and Master of Dental Surgery (B.D.S. and M.D.S.); it also grants diplomas in public health, psychiatry, and dental surgery. The university accepts the Durham University school certificate examination (if a sufficient standard is obtained in certain specified subjects) for matriculation purposes, but also accepts the tests of a considerable number of other educational bodies as a full or partial equivalent. A list may be obtained on application. In addition to satisfying the matriculation requirements of the university, every student must (1) pass a pre-registration examination in physics and inorganic chemistry conducted or recognized by the university, and (2) be registered on the books of the General Medical Council. To become a graduate, however, at the university it is not necessary to pass the major portion of the five years' curriculum within its precincts. It is sufficient if, before he presents himself for his final examination, the candidate has spent at least one year in study at the University of Durham College of Medicine, Newcastle-on-Tyne, including the practice of the Royal Victoria Infirmary in the same city. The earlier examinations may be passed while the student works elsewhere.

PROFESSIONAL EXAMINATIONS.

There are four professional examinations for the M.B., B.S. degrees. The First, Second, and Third examinations are held in March and June, and the Final Examination in June and December. The first deals with biology and organic chemistry; the second with anatomy and physiology; the third with pathology, bacteriology, materia medica, pharmacology, general principles of therapeutics, and pharmacy, medical jurisprudence, and public health. At the Final M.B., B.S. the candidate is examined in medicine and clinical medicine; surgery and clinical surgery; midwifery and diseases of women and children; clinical and practical midwifery and gynaecology; and clinically in psychological medicine, diseases of the throat, nose and ear, diseases of the skin, diseases of the eye, and diseases of children.

M.D.—A Bachelor of Medicine who wishes to proceed to this higher degree must be of at least two years' standing, and must comply with the regulations printed in the Calendar of the College of Medicine. If the candidate is not an M.B. of the university, he must be a practitioner of fifteen years' standing, 40 years of age, and submit to special tests. (See under Degrees for Practitioners, p. 402.)

M.S.—Candidates for this degree must have been engaged in practice for at least two years subsequent to becoming M.B., B.S.Durham. They are submitted to an examination which covers the whole range of surgical knowledge.

D.Ch.—The university grants also the degree of Doctor of Surgery. Candidates for this degree must be registered medical practitioners, not less than 24 years of age. They must devote three years, subsequent to obtaining a registrable qualification, to the study of surgery and ancillary subjects; one at least of the three years must be spent in the university. The candidate must submit to the professor of surgery the course of study he proposes to follow, and this course must be approved by the Board of Faculty of Medicine.

One year must be devoted mainly to work in the departments of anatomy, physiology, pathology, and bacteriology, and the candidate must submit evidence of having so worked. Not less than six months of another year must be spent as a resident surgeon in a recognized teaching hospital, and the rest of the year in the study of surgery in a recognized medical centre. Not less than six months of one of the three years must be spent in surgical study abroad.

Degree of Bachelor of Hygiene and the D.P.H.

No candidate is admitted to the final examination for the degree of B.Hy. unless he is a Bachelor of Medicine and Surgery, of not less than two years' standing, of a recognized university whose degrees are registrable on the books of the General Medical Council of the United Kingdom.

No candidate is admitted to the final examination for the D.P.H. unless he is a registered medical practitioner of not less than two years' standing.

The course of study for the B.Hy. and D.P.H. extends over a period of not less than twelve calendar months subsequent to the attainment of a qualification registrable by the General Medical Council of the United Kingdom. Candidates for the B.Hy. must attend this course at the University of Durham; candidates for the D.P.H. may attend it at the University of Durham or at any medical school or institution which is recognized by the university.

The examination for the diploma or degree consists of Part I and Part II, each of which extends over not less than two days, and is conducted by examiners specially qualified. A candidate must pass in all the subjects of Part I before being admitted to examination for Part II. In Part I, and also in Part II, a candidate must pass in all the specified subjects at one time.

The examination for Part I is practical, written, and oral, and includes the following subjects: bacteriology and parasitology (including medical entomology); chemistry and physics; and meteorology and climatology, in relation to public health. Candidates are not admitted to examination for Part I until after they have completed the prescribed courses of instruction in the subjects thereof.

The examination for Part II includes the following subjects: hygiene and sanitation (including sanitary construction); epidemiology and infectious diseases; sanitary law and vital statistics; public health administration. The examination is written and oral, and includes practical examinations in infectious diseases; food inspection, inspection of premises—dwellings, factories, workshops, schools, etc. Candidates are not admitted to examination for Part II until after they have completed the prescribed courses of instruction in the subjects thereof.

Doctor of Hygiene.

Candidates for the degree of Doctor of Hygiene must be Bachelors of Hygiene of the university of two years' standing, and are required to satisfy the examiners that they have conducted original research in the subject of public health.

Diploma in Psychiatry.

Candidates must be registered medical practitioners, and, unless qualified before January 1st, 1911, must have attended subsequent to passing their qualifying examinations, courses of instruction in: (*a*) anatomy; (*b*) physiology; (*c*) pathology; (*d*) bacteriology; (*e*) psychology and experimental psychology; (*f*) clinical neurology; (*g*) psychiatry; (*h*) clinical psychiatry. The examination consists of two parts, namely: (1) anatomy, physiology, pathology, and bacteriology; (2) psychology and experimental psychology, neurology, and psychiatry (systematic and clinical); and candidates may present themselves for the whole examination or for either part separately.

Licence and Degrees in Dental Surgery.

L.D.S.—Every dental student must, at the commencement of his studentship, be registered in the manner and under the conditions prescribed for medical students.

The First Examination consists of three parts, which may be passed separately: Part 1, organic chemistry; Part 2, biology; Part 3, theoretical dental mechanics, dental metallurgy (theoretical and practical). Second Examination: Anatomy, physiology (including biochemistry and biophysics), dental anatomy, and dental histology. Third Examination: Pathology and bacteriology, practical dental mechanics, dental materia medica and therapeutics. Final Examination: Medicine, surgery, dental surgery and pathology, orthodontics, operative dental surgery and dental prosthetics, and anaesthetics.

A candidate before presenting himself for examination is required to furnish certificates of instruction in the required subjects, attended after registration as a dental student at recognized colleges or medical schools.

Degree of Bachelor of Dental Surgery.—1.—Students taking their complete course of instruction in the university must pass the same matriculation tests as medical students, and the same pre-registration examination in inorganic chemistry and physics. After registration students must spend five years in the university. They must attend the practice of the Newcastle-upon-Tyne Dental Hospital for not less than two and a half years; six months of this time must be devoted to the study of the higher branches of dental science. There are four examinations. The subjects of the examinations are as follows: *First:* Biology, organic chemistry, and dental mechanics and metallurgy. *Second:* Anatomy, physiology, dental anatomy, and histology. *Third:* Pathology and bacteriology, dental materia medica and therapeutics, and practical and dental mechanics. *Final:* Medicine, surgery, dental surgery and pathology, orthodontics and operative dental surgery. In this subject knowledge of a much higher standard, and more advanced practical work, are required than for the Licence in Dental Surgery.

2.—Candidates possessing a Licence in Dental Surgery of a British university must study for at least one year in the university. During such year they must (*a*) attend a course of instruction in pathology and bacteriology, and (*b*) spend at least six months in the Newcastle-upon-Tyne Dental Hospital in the study and practice of the higher branches of dental science. They must also pass the third and final examinations for the degree of Bachelor of Dental Surgery.

Degree of Master of Dental Surgery.—Every candidate for this degree must be a Bachelor of Dental Surgery of the university of not less than two years' standing, and present an essay embodying original work and research in some subject connected with dentistry. He must also perform to the satisfaction of the examiners a piece of special dental work demanding a high degree of skill and experience.

The examinations are held concurrently with the medical examinations.

The practical examinations in dentistry are conducted at the Newcastle-upon-Tyne Dental Hospital.

FEES.

The following fees are payable: Matriculation, £2; Examinations, First, Second, and Third M.B., B.S., each £5; Final M.B., B.S., £15; M.D. and M.S., each £5; B.Hy., D.P.H., and D.Psy., each £10 10s., and D.Hy. and D.Ch., each £20; First, Second, and Third L.D.S., each £3 10s., and Final L.D.S. £5; First, Second, and Third B.D.S., each £5, Final B.D.S. £8; and M.D.S. £5. For degrees and diplomas: M.B., B.S., B.Hy., and B.D.S., each £6 6s. *plus* the sum of 10s. if it is the initial degree taken in the university; M.S. and M.D.S., each £6 6s.; M.D., D.Ch., and D.Hy., each £10; D.P.H., D.Psy., and L.D.S., each £3.

Further information may be obtained from the Dean of the College, University of Durham College of Medicine, Newcastle-on-Tyne.

UNIVERSITY OF LEEDS.

THE degrees granted in the Medical Faculty of this university are Bachelor of Medicine, Bachelor of Surgery (M.B. and Ch.B.), and Bachelor of Dental Surgery (B.Ch.D.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), and Master of Dental Surgery (M.Ch.D.). It also gives diplomas in public health, in psychological medicine, in dental surgery, and in nursing.

Candidates for the M.B. must have attended courses of instruction approved by the university for not less than five years, two at least of such years having been passed in the university, at least one year being subsequent to the date of passing the first examination. They must also have matriculated by satisfying the examiners in:

I. *Either* English Composition and English Literature, *or* English Composition and History.

II. *Either* Mathematics *or* Latin.

III., IV., V. *Three* other subjects not already taken under I and II above, chosen from the following list:

(1) English literature; (2) History; (3) Geography; (4) Greek; (5) Latin; (6) French; (7) German; (8) Some one other language approved by the Board; (9) Mathematics; (10) Mechanics; (11) Physics; (12) Chemistry; (13) General experimental science; (14) Natural history; (15) Botany.

Provided that (*a*) candidates who take Mathematics under II above must include one of the subjects 4—8; (*b*) candidates who take Latin under II above must include one of the subjects 9—15. In all cases Mathematics is a compulsory subject for admission to the Faculty of Medicine.

Exemption from the examination may be granted to applicants holding certificates of having passed examinations of a standard deemed by the Matriculation Board to be at least equal to the Board's examination.

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., Ch.B. number three. The first deals with (1) physics and inorganic chemistry, (2) biology, (3) organic chemistry. In each subject laboratory work is included, but the two parts can be taken separately. For neither can the candidate present himself until after matriculation and a period of approved work in the respective subjects.

The Second Examination.—The Second Examination consists of: Part I, materia medica and practical pharmacy; Part II, anatomy and physiology. Candidates will be allowed to pass any parts separately.

The Final Examination.—The Final Examination consists of: Part I, pharmacology and pathology and bacteriology; Part II, medicine, surgery, obstetrics, gynaecology, and clinical pathology; Part III, forensic medicine, public health, and therapeutics. Part I may be taken at the end of the second clinical year, and must be passed before Parts II and III are taken. Parts II and III may be taken at the end of the third clinical year but not before the completion of the fifth year of medical study. If taken separately Part II must be passed before Part III.

M.D.—Candidates for this degree must be bachelors of medicine and bachelors of surgery of the university, and subsequently to having graduated must have completed two years of hospital practice or special study approved by the university; or four years in the practice of their profession in one or other of its various branches; six months' hospital practice or special study to count as the equivalent of one year's ordinary practice. Any subject except surgery of the medical curriculum may be chosen for the examination, but a thesis, the title of which must previously receive the approval of the Board of the Faculty of Medicine, may be submitted, and if it is adjudged to be of exceptional merit the candidate may be exempted from further examination.

Ch.M.—The candidate for this degree must have been admitted to the M.B., Ch.B. of the university not less than a year previously, and during that time must have held for at least six months a surgical appointment in a public institution affording full opportunity for the study of practical surgery. He must also have attended certain courses, including one on ophthalmology and one on pathology and bacteriology; he is then examined in surgery in all its branches and in ophthalmology and pathology and bacteriology.

FEES.

The Matriculation fee is £2, and on readmission £1 10s. For each of the other examinations £6 and £6 on readmission; Ch.M. £10 and same on readmission; M.D. £10. On conferment of the degree of Ch.M. £5 is payable, and £5 for the M.D. degree.

UNIVERSITY OF LIVERPOOL.

THIS university, besides granting degrees in medicine (M.B. and M.D.) and in surgery (Ch.B., M.Ch.Orth., and Ch.M.), gives degrees in dental surgery (B.D.S. and M.D.S.), a degree in hygiene (M.H.), and degrees in veterinary science (B.V.Sc., M.V.Sc., and D.V.Sc.). Diplomas are awarded in dental surgery (L.D.S.), tropical medicine (D.T.M.), tropical hygiene (D.T.H.), public health (D.P.H.), veterinary hygiene (D.V.H.), and medical radiology and electrology (D.M.R.E.). The degree of Doctor of Philosophy (Ph.D.) may also be taken in the Faculty of Medicine.

MATRICULATION.

The matriculation examination is governed by the Joint Matriculation Board, 315, Oxford Road, Manchester, which accepts, under certain conditions, the tests of several other bodies as its equivalent. Candidates will be required to have included mathematics among the subjects in which they have passed at such examination.

PROFESSIONAL EXAMINATIONS.

Candidates for the M.B., Ch.B. degrees have three examinations to pass, the first including (1) chemistry, (2) biology (zoology and botany), (3) physics, (4) special chemistry.

Second M.B.—This test covers (*a*) (1) anatomy, (2) physiology, including physiological chemistry and histology; and (*b*) (3) elementary bacteriology, (4) clinical chemistry, (5) general pathology. Candidates may present themselves in (*a*) and (*b*) separately.

Final M.B.—The subjects of the Final Examination are: (*a*) (1) special pathology and morbid anatomy, (2) forensic medicine and toxicology, (3) public health, (4) pharmacology and general therapeutics; (*b*) (5) obstetrics and diseases of women, (6) surgery—systematic, clinical, operative, and practical—including ophthalmology, (7) medicine—systematic and clinical—including therapeutics, mental diseases, and diseases of children. Candidates may take Parts (*a*) and (*b*) separately, but Part (*b*) may not be taken until five years of study have been completed.

M.D.—May be conferred on graduates (M.B., Ch.B. Liverpool) (*a*) on candidates of two years' standing who present a thesis acceptable to the Faculty, together with, if candidate desires, copies of published original papers upon medical science—oral examination on subject of thesis; (*b*) on candidates of five years' standing by examination.

Ch.M.—May be conferred on graduates (M.B., Ch.B. Liverpool) after examination. Other information concerning the diplomas of this university and its medical school will be found on page 376.

FELLOWSHIPS, SCHOLARSHIPS, AND EXHIBITIONS.

The university awards Fellowships annually to students of distinguished merit, as follows:

(1) John Rankin Fellowships in Anatomy; two, each of the value of £120, tenable for two years. (2) Ethel Boyce Fellowship in Gynaecology, value £100 and tenable for one year, open to fully qualified medical students of either sex. (3) John W. Garrett International Fellowship in Bacteriology, value £100 and tenable for one year. (4) Robert Gee Fellowship in Human Anatomy, value £100 and tenable for one year. (5) Holt Fellowships in Physiology and Pathology, two in number, value £150 each and tenable for one year. (6) Johnston Colonial Fellowship in Biochemistry, value £100 and tenable for one year. (7) Thelwall Thomas Fellowship in Surgical Pathology, value £200 and tenable for one year. (8) Lady Jones Fellowship in Orthopaedic Surgery, one, value £200, offered every two years.

There are, in addition, scholarships and exhibitions open to medical students.

VICTORIA UNIVERSITY OF MANCHESTER.

THIS university grants the four ordinary degrees in medicine and surgery—M.B. and Ch.B. and M.D. and Ch.M.; a degree and diploma in dental surgery; a diploma in public health; a certificate in factory and in school hygiene; a diploma in psychological medicine; and a diploma in bacteriology. Candidates for degrees must pass the special matriculation examination prescribed by the Faculty of Medicine (or some equivalent examination accepted in lieu thereof; see the prospectus of the Joint Matriculation Board), and study at the university itself for at least two years of the six years' curriculum, subsequent to the passing of the First M.B. Examination. The matriculation examination comprises (1) Latin, (2) mathematics, (3) the English language, its literature and history, (4) mechanics, (5) one subject at choice as approved by the Joint Board. It is held in July and September.

PROFESSIONAL EXAMINATIONS.

M.B., Ch.B.—There are four examinations for this degree. They must be passed in proper order, and before admission to them the candidate must be duly certified as having attended in the subjects involved. The First M.B. is divided into Part I, chemistry and physics; Part II, biology—(*a*) botany, (*b*) zoology. The parts may be taken separately or together. At the Second M.B. the candidate is examined in anatomy (including histology) and physiology; at the third in pathology, bacteriology, and pharmacology (including materia medica and practical pharmacy). The Final Examination, under new regulations, is divided into two parts, which may be taken separately. Part I consists of (*a*) forensic medicine and toxicology, and (*b*) hygiene and preventive medicine. Part II consists of (*a*) medicine, including dermatology, diseases of children, and mental diseases; (*b*) surgery, surgical pathology, and diseases of the eye and of the ear, nose, and throat; (*c*) obstetrics and gynaecology.

M.D.—A candidate for this degree must be a Bachelor of Medicine of at least one year's standing. He has a choice between presenting an original dissertation or undergoing a written (as well as practical and clinical) examination in medicine, and a written and practical examination in pathology, and one other subject selected by himself.

Ch.M.—A candidate must have held, since becoming Ch.B., and for not less than twelve months, a post in a public institution affording opportunity for the study of the branch of surgery in which examination is desired. The examination in Branch I comprises the general field of surgery; Branch II, obstetrics and gynaecology; Branch III, ophthalmology; Branch IV, otology, laryngology, and rhinology.

B.Sc. and M.Sc.—The ordinary degree of B.Sc. in the Schools of Anatomy and Physiology may be obtained by students in medicine who in their third year of study for the degree of M.B., Ch.B. complete the additional courses in these subjects prescribed for this degree. Candidates for the Honours degree of B.Sc. in anatomy or physiology who are students in medicine are required to attend courses in advanced anatomy and physiology for four terms after passing the Second Examination for the degrees of M.B., Ch.B. Graduates in science of this university, of not less than one year's standing from the date of their graduation as Bachelors, may proceed to the degree of M.Sc. by the presentation of an approved thesis on some subject coming within the scope of the Faculty of Science.

FEES.

The following examination fees are payable: Matriculation, £2; on readmission, £2. Each M.B. examination, £8 8s.; on readmission, £3 3s. M.D., including the conferring of the degree, £15 15s. Ch.M., £10 for the examination and £10 10s. for conferment of degree. Application for further information should be addressed to the Dean of the Medical School.

UNIVERSITY OF SHEFFIELD.

THE degrees of this university (M.B., Ch.B., M.D. and Ch.M., B.D.S., and M.D.S.), and the diploma of licentiate in dental surgery, are open to candidates of either sex. Candidates for a degree must have matriculated in the university or have passed such other examination as may be recognized for this purpose, and have passed the further examination in chemistry and physics.

PROFESSIONAL EXAMINATIONS.

A candidate for the degrees of M.B., Ch.B. must produce certificates that he will have attained the age of 22 years by the day of graduation; that he has pursued the courses of study required by the university regulations during not less than five and a half years subsequent to the date of his matriculation or exception from matriculation, three of such years at least having been passed in the university, one at least being subsequent to the passing of the Second Examination. The following examinations must be passed in due order.

First Examination.—The subjects are chemistry, physics, and biology. Candidates who have passed the Intermediate Examination of the Faculty of Pure Science in any or all of the subjects of the First M.B. Examination will, on payment of the fee for the latter examination, be deemed to have passed it when they have passed in such subjects as they did not take for the Intermediate B.Sc. Examination. Candidates on presenting themselves for this examination are required to furnish certificates of having attended for not less than one year approved courses of instruction, after matriculation, in (i) chemistry, inorganic and organic; (ii) physics; (iii) biology; and of having passed or obtained exemption from the preliminary examination in chemistry and physics.

Second Examination.—The subjects are anatomy and physiology (Part I). The candidate must have passed the First Examination, and must have attended (1) courses on anatomy, including lectures and practical anatomy, during five terms; (2) courses on physiology, including lectures and practical physiology, during one year.

Third Examination.—The subjects are pathology and pharmacology, applied anatomy, and physiology. Candidates must have attended courses of instruction in pathology for five terms, in pharmacology for four terms (and one term in pharmacy), in applied anatomy for four terms, and in physiology (Part II) for six terms.

Final Examination.—The subjects are: Part I, forensic medicine and public health; candidates must have attended courses for one term in each subject. Part II, medicine (including mental diseases and diseases of children and vaccination), special pathology (including morbid anatomy and clinical pathology), and therapeutics. Part III, surgery (including the administration of anaesthetics, diseases of the ear, nose, and throat, ophthalmology, and surgical pathology), and obstetrics and gynaecology (including ante-natal and post-natal practice and infant hygiene). Candidates for Parts II and III must have completed a minimum of five and a half years of study.

M.D.—Candidates for the degree of Doctor of Medicine must have passed the examination for the degrees of M.B., Ch.B. at least three years previously, must present a thesis embodying observations in some subject approved by the Professor of Medicine, and must pass an examination in the principles and practice of medicine.

Ch.M.—Candidates for the degree of Master of Surgery must have passed the examination for the degrees of M.B., Ch.B. at least three years previously, and must, since taking the degrees of M.B., Ch.B., have held for not less than twelve months a surgical appointment in a public hospital or other public institution affording full opportunity for the study of practical surgery. The subjects of examination

are systematic, clinical, and operative surgery, surgical anatomy, surgical pathology, and bacteriology.

Other information concerning this university will be found in the section devoted to Provincial Medical Schools.

UNIVERSITY OF WALES.

THE Charter and statutes of the University of Wales provide *inter alia* for a Faculty of Medicine and for the granting of the following degrees: Bachelor in Medicine (M.B.), Bachelor in Surgery (B.Ch.), Master in Surgery (M.Ch.), and Doctor in Medicine (M.D.).

A candidate for the M.B., B.Ch. is required to pursue a course of study of not less than six academic years subsequent to matriculation in the university, and of these years at least three must have been passed in one of the constituent colleges of the university. These are the University College of Wales, Aberystwyth; University College of North Wales, Bangor; University College of South Wales and Monmouthshire, Cardiff; and University College of Swansea. He must also hold an arts or science degree of the University of Wales, or of some other university approved for this purpose. Certain of the courses of study pursued for a B.Sc. or a B.A. degree may be counted as courses required for the degrees in the Medical Faculty.

The courses for the M.B., B.Ch. are divided into two sections, of which the first includes the preliminary subjects —physics, chemistry, botany, zoology; and the ancillary subjects—organic chemistry, human anatomy, and physiology. Study of the preliminary subjects and of organic chemistry must extend over at least one academic year; study of physiology and anatomy must extend over at least two academic years; the first section of the course must occupy not less than three years. The second section includes courses in pathology, bacteriology, pharmacology, hygiene and forensic medicine, medicine, surgery, and obstetrics and gynaecology, and cannot be commenced, except in the case of pharmacology, until the examinations relating to the preliminary and ancillary courses have been passed. Examinations in all the subjects are held in June of each year, and in medicine, surgery, obstetrics, and gynaecology in December also.

The university also offers courses of study in public health and in tuberculosis. Candidates for the diploma in public health (D.P.H.) and for the tuberculous diseases diploma (T.D.D.) must possess a medical qualification registrable for practice in Great Britain and Ireland, and must have completed courses of study as prescribed by the regulations either at the Welsh National School of Medicine, Cardiff, or at another institution approved by the university.

WELSH NATIONAL SCHOOL OF MEDICINE.

Students can complete the whole of their curriculum in the Welsh National School of Medicine, and qualify for the degrees of M.B., Ch.B. in the university.

Further information may be obtained from the Registrar, the University Registry, Cathays Park, Cardiff.

English Medical Corporations.

THERE are in England three medical corporations which grant licences to practise—the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The first two combine for certain purposes to form what is known as the Conjoint Board in England. Details concerning this body, its component Colleges, and the third licensing body here follow.

THE CONJOINT BOARD.

THIS body—the Examining Board in England—deals with the qualifications of all candidates for the Licence of the Royal College of Physicians of London and for the Membership of the Royal College of Surgeons of England. It prescribes for them certain periods of study, and recommends those who pass the required examinations for the Licence and for the diploma of Member respectively. The successful candidate is then entitled to register as L.R.C.P.Lond., M.R.C.S.Eng. It performs the same task in connexion with diplomas in public health, tropical diseases, ophthalmic medicine and surgery, psychological medicine, laryngology and otology, and gynaecology and obstetrics—jointly issued by the two Colleges in question. Under the present regulations every candidate for the L.R.C.P. and M.R.C.S. must (1) complete five years of professional study after passing a recognized preliminary examination and a recognized pre-medical examination in chemistry and physics; (2) comply with the regulations, which may be had from the Secretary, Examination Hall, Queen Square, London, W.C.1; and (3) pass the two professional examinations of which particulars appear below. The old regulations for the Conjoint diploma, of which an account was given in the Educational Number of the *British Medical Journal* for 1922, still apply to students who passed their preliminary examination in general education before January 1st, 1923.

PRESENT REGULATIONS FOR THE CONJOINT DIPLOMAS.

The following is an outline of the present regulations for the L.R.C.P.Lond. and M.R.C.S.Eng. The full regulations and synopses and forms of certificate may be obtained from the Secretary.

PRE-MEDICAL EXAMINATION.

Students are required to pass a pre-medical examination in chemistry, physics, and elementary biology, conducted by the Conjoint Examining Board, before commencing the five years' curriculum of professional study, or some other examination recognized by the Board—namely, the examination in chemistry, physics, and biology for the degree in Medicine of any university recognized by the Board, the higher school certificates of Oxford and Cambridge Universities and the Oxford and Cambridge Schools Examination Board, the higher certificates of London, Bristol, Durham Universities, the Joint Matriculation Board of the Northern Universities, the Central Welsh Board higher certificate, or the pre-medical examination in chemistry, physics, and biology conducted by any of the qualifying bodies whose degrees or diplomas are registrable on the *Medical Register*.

A candidate must enter for chemistry and physics together, and he will not be allowed to pass in one without obtaining at the same time at least half the number of marks required to pass in the other subject. He will be admitted to the examination on producing evidence of having passed the required preliminary examination in general education.

The examination is partly written, partly oral, and partly practical. A candidate rejected in one or both subjects of the examination will not be admitted to re-examination until after the lapse of a period of not less than three months. Not more than two terms of professional study is recognized before the examination in elementary biology is passed.

PROFESSIONAL EXAMINATIONS.

There are two professional examinations, called the First and Final Examinations. The courses of study for the First Examination may be commenced before the pre-medical examination in chemistry and physics or some equivalent examination has been passed provided three terms of study of anatomy and physiology are completed after passing such examination.

First Professional Examination.—The subjects of this are: Section I, (*a*) Anatomy, including histology and embryology; (*b*) physiology, including biochemistry. Section II, Pharmacology, practical pharmacy, and materia medica. A candidate must have attended at a recognized Medical School courses of instruction in anatomy, including embryology, during five terms, in the course of which he must dissect the whole body; courses of instruction in physiology, including general biology, biochemistry, and biophysics during five terms; courses of instruction in pharmacology and materia medica. A candidate may present himself for the two sections together or separately, but he must take parts (*a*) and (*b*) of Section I together until he has passed in one or both parts, but a candidate will not be allowed to pass in one part unless he obtains at the same time at least half the number of marks required to pass in the other part. Section II of the examination may be passed at any time before the candidate enters for the Final Professional Examination. A candidate who produces satisfactory evidence of having passed an examination in the subjects of Section I or of either part of Section I and of Section II in the examination for the degree in Medicine conducted at a university recognized by the Board will be exempted from further examination in such subject or subjects.

Final Professional Examination.—The subjects of this are: Section I, Pathology (including morbid anatomy, morbid histology, and clinical pathology) and bacteriology. Section II, Part I, Medicine, including medical anatomy, forensic medicine, and public health; Part II, Surgery, including surgical anatomy and the use of surgical appliances; Part III, Midwifery and gynaecology. The examination is partly written, partly practical, partly clinical, and partly oral. A candidate may take Sections I and II and the three parts of Section II of the Final Examination separately, or may take the whole examination together. He will be required to produce the certificates prescribed by the regulations before being admitted to the respective parts of the examination. No exemption is granted from any subject in the Final Examination.

FEES.

The fee for the *Pre-Medical Examination* is four guineas, for re-examination in Chemistry two guineas, for re-examination in Physics one guinea, and for Biology one guinea. The fee for the *First Professional Examination* is ten guineas, for re-examination after rejection in Section I six guineas, for re-examination after rejection in either part of Section I three guineas, for re-examination after rejection in Section II three guineas. The fee for admission to Section I of the *Final Professional Examination* is four guineas, for admission to Section II, Part I, ten guineas; Part II, ten guineas; Part III, six guineas; and the re-examination fees are respectively three guineas, six guineas, and four guineas.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THIS College has three grades—its Licentiates, its Members, and its Fellows. The Licence is now only issued through the Conjoint Board. The Membership (examinations for which are held in January, April, July, and October) is only granted to those who have obtained the Licence, or to those who are registered practitioners and graduates of a recognized university; in any case they must be persons over 23 years of age. Candidates are examined in pathology and the practice of physic, partly in writing and partly viva voce; they are also examined in Latin, Greek, French, and German. The languages are not compulsory, but credit is given to those who show a knowledge of them. The fee for the Membership is £42, or in the case of a Licentiate £21. There is a fee of £10 10s., payable before entrance to the examination, which in the case of successful candidates is reckoned as part of the Membership fee. The body of Fellows is maintained by election from among the Members.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS College has two grades—Members and Fellows. The Members are admitted as stated in the section dealing with the Conjoint Board. The Fellowship is granted after examination to persons at least 25 years of age who have been engaged in professional studies for six years. There are two examinations for the Fellowship—the first in anatomy and physiology, held in the months of June and December, which may be passed after the third winter session; the second held in the months of May and November, chiefly directed to surgery, which may be passed after six years of professional study. Candidates must pass the Final Examination of the Examining Board in England and be admitted Members of the College before admission to the Second Examination for the Fellowship, except in the case of graduates in medicine and surgery of not less than four years' standing of universities recognized by the College for the purpose, who are required to attend for one year the surgical practice of a general hospital recognized by the College after obtaining their degrees, which must be registrable in this country.

Fees.—At First Examination, £8 8s.; for re-examination, £5 5s. At Second Examination, £12 12s. Admission fee £10 10s. for members, £31 10s. for non-members.

SOCIETY OF APOTHECARIES OF LONDON.

THIS body confers a registrable diploma in medicine, surgery, and midwifery, now known as the L.M.S.S.A. (Licentiate in Medicine and Surgery of the Society of Apothecaries), on those successful at the following examinations:

Pre-medical Examination.—Chemistry and chemical physics, and elementary biology.

Primary Examination.—This includes anatomy, physiology, and histology, and materia medica and pharmacy. Candidates will be excused any or all the subjects of the Primary Examination on producing evidence that they have passed equivalent examinations before an examining body recognized by the Society. Candidates referred in anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

Final Examination.—This is divided into three parts. Part I includes clinical surgery, the principles and practice of surgery, surgical pathology, operative manipulation, surgical anatomy, instruments and appliances. Part II includes clinical medicine: (*a*) the principles and practice of medicine (including therapeutics, pharmacy, and prescriptions), bacteriology, pathology, and morbid histology; (*b*) forensic medicine, hygiene, theory and practice of vaccination, and mental diseases. Part III includes clinical midwifery, gynaecology, and diseases of newborn children, obstetric instruments and appliances.

The fee for the Primary Examination is £5 5s.; for the Final, £15 15s. The regulations and synopses relating to the several examinations, and other information, may be obtained from the Registrar, Apothecaries' Hall, Blackfriars, E.C.4.

Mastery of Midwifery.

The Society has recently instituted a Mastery of Midwifery, and issues a diploma under this title denoting the possession of specialized knowledge of ante-natal care, midwifery, and child welfare. The examinations take place in May and November, and candidates are required to submit certificates, etc., fourteen days before date of examination. It is intended to impose a severe test so as to ensure a high standard of professional knowledge, but the diploma will not be registrable under the Medical Acts. Admission is open to all who have been for not less than a year in possession of a registrable medical qualification, and who have had certain prescribed experience at recognized institutions concerned with obstetrics, ante-natal work, and child welfare work. Special conditions apply, until 1932, to practitioners of ten years' standing. The entrance fee for the examination is £10 10s., and a further fee of £10 10s. is payable by successful candidates before admission to the Mastery. Copies of the regulations may be obtained from the Registrar at the address given in the preceding paragraph.

The Scottish Universities.

THERE are in Scotland four universities, each possessing a Faculty of Medicine, and having the right to confer degrees which admit the holder to the *Medical Register*. In essential points the regulations in their medical faculties for undergraduates are much alike, so that a general account can be given of all of them together.

The universities are those of Edinburgh, Glasgow, Aberdeen, and St. Andrews. The provision each of the cities in which these universities are situated makes for the education of medical students will be found in the section on Medical Schools in Scotland; here it need merely be said that degrees in medicine from Scotland as a whole have always enjoyed a high repute.

The degrees granted in medicine and surgery to candidates of either sex are four in number—Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.). The two former are not obtainable one apart from the other. Besides these degrees a diploma in tropical medicine and hygiene is obtainable from the University of Edinburgh, as also diplomas in psychiatry, public health, radiology, and tropical veterinary medicine. As for public health, registrable degrees in this subject are granted by the University of Glasgow, while diplomas in public health may be obtained from the Universities of St. Andrews and Aberdeen.

The conditions for admission of graduating students of medicine are the same as those in the Faculties of Arts or Science (for degrees in pure science). Prospective medical students are also required to pass a pre-registration examination in chemistry and physics.

PROFESSIONAL EDUCATION.

The regulations comply in all respects with the requirements and recommendations of the General Medical Council, and, in addition, necessitate definite study for stated periods of diseases of children, of the larynx, ear, and nose, of the skin, of ophthalmology, and of mental diseases. In respect of the various courses certificates must be obtained showing that the student has not only attended regularly, but has duly performed the work of the class. Out of the necessary five years of medical study, not less than two must be spent at the university whose degrees the student hopes to obtain, and the balance at any place officially recognized for such purpose. In each academic year there

are two sessions—one lasting from the beginning of October to the middle of March, and the other from the middle of April to the beginning of July.

PROFESSIONAL EXAMINATIONS.

The distinctive feature of the Scottish curriculum is that though nominally there are only four examinations, each of these may be, and habitually is, split up by the student into sections. Hence, a student may complete some stage of his career during the course of nearly every session. Thus, by the end of the first winter session the student may pass in zoology and chemistry. At the end of the first summer session he can finish with botany and physics, and with anatomy and physiology at the end of the second. Pathology and materia medica he will pass at the end of the third year, and so on, until the final examination in midwifery, surgery, and medicine, and the corresponding clinical subjects, at the end of the fifth year of study. At each examination the candidate may pass "with distinction," and a record is kept of the merit displayed, so that when the time comes for the candidate to graduate, one who has done well throughout can be declared as graduating with honours. A further point in the system is that the student's own teachers commonly take some part in his examination.

Of the four examinations, the first deals with physics, botany, zoology, and chemistry; the second with anatomy and physiology; the third with materia medica and pathology; the fourth with medicine and surgery (clinical and systematic), midwifery, clinical midwifery, and clinical gynaecology, and forensic medicine and public health. The first three examinations are held three times a year; the final twice a year.

Exemption from the first professional examination can be obtained by candidates who have passed an arts, science, or medical degree examination in its subjects at any recognized university. When a candidate presents himself for an examination in several of its parts, but is not successful in all of them, he is credited at the next examination with those subjects in which he has already been approved.

THE HIGHER DEGREES.

It is open to those who are already M.B., Ch.B. to proceed either to the M.D. or the Ch.M. A candidate for the former must have been engaged for not less than one year in work in the medical wards of a hospital, or in scientific research in a recognized laboratory, or in the Naval or Military Medical Service, or have been at least two years in general practice, and he must be 24 years of age. He has to write a thesis on any subject not exclusively surgical, and is examined in clinical medicine and in some one or other of its special departments. The regulations for candidates for the Ch.M. are of a corresponding character, a period of surgical work in a hospital or elsewhere being substituted for medical work, and the thesis being on a surgical rather than a medical subject. He is examined in surgical anatomy, clinical surgery, operative surgery, and in some of the special departments of surgery.

FEES.

It is estimated that the class, examination, and other fees for the M.B., Ch.B. come altogether to about £256, the separate examination fees included in this calculation being as follows:

	£	s.	d.
First Professional	9	9	0
Second Professional...	7	7	0
Third Professional	6	6	0
Final	11	11	0

Re-entry in any subject in which the candidate has failed entails a fresh payment of £1 1s. Candidates for the M.D. and Ch.M. pay £21, and on re-entry £5 5s.

More detailed information with regard to the University of Edinburgh can be obtained from the *Medical Programme*, price 6d., which is published by Mr. Thin, 55, South Bridge, Edinburgh, or on application to the Dean of the Faculty of Medicine. Similar information about Glasgow should be sought from the Assistant Clerk, Matriculation Office, Glasgow. With regard to Aberdeen, application may be made to the Secretary of the Medical Faculty, Marischal College. In respect of St. Andrews, information can be obtained either from the Secretary of the University, or, alternatively, the Secretary of the United College, St. Andrews, or the Secretary of University College, Dundee, these being the two constituent colleges of the University of St. Andrews.

Finally, it should be mentioned that in connexion with all the Scottish universities there are valuable bursaries and scholarships, some information as to which will be found in the article on Medical Schools.

THE CARNEGIE TRUST.

The following is a summary of the regulations made by the Carnegie Trust for the Universities of Scotland for assistance in the payment of class fees in the universities and extra-mural colleges of Scotland.

Applicants must be over 17 years of age; they must be of Scottish birth or extraction, or have attended for two years, after the age of 14, at a school or institution under inspection of the Scottish Education Department. Applicants so qualified who have been pupils of schools under the Scottish Education Department will be eligible for assistance in the payment of class fees if they have obtained the leaving certificate of the Department, provided that it bears evidence of such preliminary education as is required by the universities for their graduating curricula, or that it has been supplemented by such passes either in the Scottish Universities Preliminary or other examination as will satisfy the above requirement of the universities. Where applicants have not been pupils of schools under the Scottish Education Department, or where other good ground for not having obtained the leaving certificate can be shown, the Executive Committee has power to accept instead what it deems equivalent evidence of attainments.

Applicants in the Faculties of Arts and Science must have had their course of study for each academic year approved by the University Adviser of Studies, and they must have passed the graduation examinations belonging to the previous stage of their curriculum before becoming eligible for assistance in the payment of fees of classes belonging to a further stage. Beneficiaries must submit to the Executive Committee at the end of each session particulars as to their attendance and work, any distinctions gained, and any graduation examinations passed.

The annual allowance towards payment of class fees offered to beneficiaries by the Trust in the Faculty of Medicine is £19 for four years, in all £76. Any unexpended part of a grant will be carried forward to the succeeding year. In combinations of Faculties the allowances available for beneficiaries are: Arts and Medicine—two Arts grants of £8 and four Medicine grants of £19, in all £92; Science and Medicine—two Science grants of £17 and four Medicine grants of £19, in all £110.

Applicants, in writing for application forms, must name the university and faculty in which they intend to study, and state whether they have previously obtained the benefits of the Trust. Applications must be lodged not later than October 25th for the winter session, or May 10th for the summer session. Payments are made by means of fee coupons, and fees already paid are not refunded.

The Scottish Corporations.

THERE are three medical corporations in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Their licences can be separately obtained only by persons who are already in possession of a recognized qualification—in surgery in the case of the College of Physicians, and in medicine in the case of the College of Surgeons and the Faculty of Physicians and Surgeons of Glasgow. All others must submit to the examinations held by the Conjoint Board, which the three corporations have combined to form. Details concerning this Board and its component colleges follow. The conditions on which their higher qualifications are granted will be found set forth separately in connexion with each corporation.

THE CONJOINT BOARD IN SCOTLAND.

THIS body has charge of all questions connected with candidates for the Conjoint Licences of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Those finally approved by it are entitled to registration and to the initials denoting the Licences of the three bodies concerned—namely, L.R.C.P.Ed., L.R.C.S.Ed. and L.R.F.P.S.Glas. The Board requires all candidates to comply with the regulations of the General Medical Council. It has an arts examination of its own, but is prepared to accept in its place any of the other educational tests approved by the General Medical Council. All candidates must obtain registration with the General Medical Council.

Professional Curriculum for Candidates registered as Medical Students after October 1st, 1930.

Subsequent to registration as a medical student the candidate must pass not less than five years in medical study, each comprising a winter and a summer session. The Board does not insist that candidates shall pursue their study at any particular place, and is prepared to accept certificates of having attended the necessary courses from any recognized medical school.

Its examinations are four in number, each of them being held four times every year, and these will fall to be held three times in Edinburgh and once in Glasgow during the next period; it is open to candidates to present themselves for examination at either place. The first examination deals with general biology (systematic and practical), and physics and chemistry (systematic and practical); the second with anatomy, embryology, physiology, biochemistry and biophysics; the third with pathology (including bacteriology and morbid anatomy) and pharmacology (theoretical and practical); and the final with (1) medicine, including therapeutics, applied anatomy and physiology, and clinical pathology, with practical medicine; (2) surgery, including applied anatomy and physiology, clinical pathology, and practical surgery; (3) midwifery and diseases of women, clinical obstetrics and gynaecology, with practical midwifery; and (4) medical jurisprudence and public health. All candidates for the Final Examination must complete portions (1) (2) and (3), which must be taken together, within a period of nineteen months.

These examinations must be passed in due order, and before admission to any of them the candidate must supply certificates showing that he has completed the due periods of study of their subjects. He can present himself in any single subject of the first three examinations. As regards the Final Examination, a candidate can present himself in medical jurisprudence and hygiene at any time after completion of the third examination and of his study of these subjects; but in medicine, surgery, and midwifery he cannot present himself until the completion of five years' study, and he must take them all simultaneously. A candidate who takes up several subjects of an examination or the whole of the subjects at one time, but fails in some of them, is credited at the next examination with those subjects in which he has been approved.

Part or entire exemption from the first three examinations may be granted to those who have already passed before other bodies examinations deemed by the Board equivalent to its own, but all candidates for the Conjoint Licence must sit for the Final Examination, and at no examination can a candidate present himself within three months of his rejection by some other licensing body.

FEES.

It is estimated that the total cost of lectures and fees for the Conjoint Licence is about £170. The separate examination fees are as follows: First, Second, and Third Professional, £5 each; Final £15. On re-entry for any of the first three examinations £3, and on re-entry for the Final, £5. If the re-entry is only in one or two subjects of the First, Second, or Third Examination the fees are smaller.

Information concerning this Board should be sought either from Mr. David Thomson, 49, George Square, Edinburgh, or from Mr. Walter Hurst, Faculty Hall, 242, St. Vincent Street, Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THIS College has three grades—Licentiateship, Membership, and Fellowship—all of which are open to men and women. The regulations applying to candidates for the Licentiateship have already been generally indicated. If desirous of receiving it apart from those of the other two corporations they must be duly registered medical practitioners. Candidates will be required to pass an examination corresponding to the medical part of the Final Examination of the Conjoint Board, and conditioned in the same way, and also an examination in materia medica. The fee for examination is 15 guineas, a special examination being obtainable on due cause being shown, and on payment of 5 guineas extra. Ordinary examinations take place monthly on the first Wednesday and Thursday, except in September and October.

Candidates for the Membership must be either Licentiates of a British or Irish College of Physicians, or alternatively graduates of medicine of a university, approved by the Council, and in either case not less than 24 years of age. Candidates are examined in medicine and therapeutics, also on one or more departments of medicine specially professed, and approved by the Council, in which a high standard of proficiency will be expected. The fee to be paid by a candidate for the Membership is £36 15s. The examination is held quarterly, on the second Tuesday and following days of the months of January, April, July, and October, and application for admission to it must be made a month previous to the date at which it is proposed to appear.

For the Fellowship the candidate must have been a Member of the College for at least three years, and, if accepted, pay fees, including £25 stamp duty, amounting altogether to £64 18s. Further details can be obtained on application to the Secretary of the College.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THIS College has two grades—its Licence and its Fellowship. Licentiates may be of either sex, and for the Fellowship women are eligible also.

Licence.

As an original qualification the Licence is only granted after fulfilment of the regulations of the Scottish Conjoint Board, but as an additional qualification it can be obtained by those already possessed of a registrable or equivalent qualification in medicine. In this case the candidate has to pass a written, oral, and clinical examination in surgery and surgical anatomy, and may be asked to operate on the dead body.

The fee is £15 15s., of which £10 10s. is returned to unsuccessful candidates. On due cause being shown, a special examination may be granted, the fee being £20, of which £10 is returned to a candidate if he is not approved.

Fellowship.

Candidates for the Fellowship must be not less than 25 years of age, and have been in the practice or study of their profession subsequent to registration for at least two years, and must hold either a surgical degree from a university recognized for that purpose by the College, or a registrable diploma obtained as the result of an examination which includes surgery as well as medicine and midwifery. Candidates are examined in (*a*) the principles and practice of surgery, including surgical anatomy, (*b*) clinical surgery, and (*c*) one optional subject, which they may choose from among the following: surgical pathology and operative surgery, ophthalmology, laryngology, otology and rhinology, gynaecology, obstetric surgery, anatomy, and dental surgery and pathology. The examination is written, oral, and clinical or practical. A candidate who desires to be examined must give one month's notice. After having passed the examination he must lodge with the Clerk to the College a petition asking that his name be placed before the College for election as a Fellow. This petition must be signed by two Fellows, as proposer and seconder, who should be sufficiently acquainted with the candidate to vouch that he is in every way a suitable candidate for the Fellowship. Examinations are held four times a year—January, March, July, and September. It is desirable that either the proposer or the seconder should be resident in Edinburgh. *Candidates are not allowed to appear more than three times at the examinations.*

Licentiates of the College pay £40, and others £50. For further information application should be made to the Clerk of the College, Mr. David Thomson, 49, George Square, Edinburgh, from whom a copy of the *Laws Relating to the Fellowship by Examination* may be obtained.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

THIS body possesses two classes—Licentiates and Fellows. The regulations applying to the former correspond with those respecting candidates for the Licence of the Royal College of Surgeons of Edinburgh. Candidates for the single Licence are examined in surgery (including clinical surgery and surgical anatomy. The fee is £15 15s., and examinations are held quarterly. Candidates for the Fellowship must be qualified medical men of not less than two years' standing and 24 years of age. Candidates approved at this examination are then eligible for election as Fellows. The Faculty can also elect three Fellows annually without previously submitting them to examination, provided they "have highly distinguished themselves in medical science or practice." They must be of not less than ten years' standing and 40 years of age.

The fee for the Fellowship is £50. Further information can be obtained from Mr. Walter Hurst, Faculty Hall, 242, St. Vincent Street, Glasgow.

Irish Universities and Corporations.

MEDICAL REGISTRATION IN THE IRISH FREE STATE.

THE Medical Practitioners Act, 1927 (Irish Free State), provides for the establishment of a Medical Registration Council for the Irish Free State. The main functions of the Council will be (1) to keep a register of medical practitioners who may desire to practise permanently or temporarily in the Irish Free State, and (2) to exercise disciplinary power with regard to all medical practitioners who are on the register and engaged in practice in the Irish Free State. The first schedule of the Act contains the agreement between Great Britain, the Irish Free State, and Northern Ireland. This agreement provides for the nomination of a member of the General Medical Council, formerly made for Ireland by His Majesty on the advice of the Privy Council, to be made henceforth by His Majesty in Council on the recommendation of the Governor of Northern Ireland. The nominations of members of the General Medical Council by universities and medical corporations in Ireland and the election of a member of the General Medical Council by registered medical practitioners in Ireland will be in all respects the same as heretofore. The constitution of the General Medical Council and of the several Branch Councils as formerly existing under the Medical Acts, and the powers of holding qualifying examinations and granting diplomas for the purpose of registration in the general *Register* formerly vested in certain universities and medical corporations in Ireland, are not affected by the establishment of the Irish Free State or of Northern Ireland, and for the purpose of the preparation and keeping of the general *Register* the General Medical Council and the Branch Council for Ireland shall have the same powers and jurisdictions under the Medical Acts as they exercised formerly. The agreement provides also that any person who is or shall be registered in the general *Register* shall be entitled on the payment of a prescribed fee to be registered in the *Irish Free State Register*, but this fee will not be payable by any person who, on the date of the establishment of the *Irish Free State Medical Register*, is registered on the general *Register*. Then follow provisions with regard to the erasure from the *Register* of the name of a person on account of misconduct.

The *Irish Free State Medical Register* was established on May 26th, 1928, this being the date appointed by the Medical Registration Council. The *Register* on establishment contained the names of every medical practitioner who was registered in the general *Medical Register* immediately before May 26th, 1928, and who either was then resident in the Free State, according to his address as stated in the general *Register*, or was living outside the Free State and applied to the Council within one month before May 26th, 1928, to be registered. No fee for registration was charged in such cases.

For registration in the *Irish Free State Register* subsequent to its establishment a fee is required, together with a prescribed form of application. A person is eligible for registration if he is at the time of application registered in the general *Medical Register*, or if he possesses the requisite qualifying diploma granted by colleges or bodies in the Free State as set out in the Act. Application for further information may be made to the Registrar, Medical Registration Council, Room 35, Upper Fitzwilliam Street, Dublin.

THE IRISH UNIVERSITIES.

THERE are three universities in Ireland, each with a medical faculty. These are, in the Irish Free State, the University of Dublin (usually known as Trinity College, Dublin), and the National University of Ireland; and, in Northern Ireland, the Queen's University of Belfast.

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.

THIS university grants two degrees in medicine (M.B. and M.D.), two in surgery (B.Ch. and M.Ch.), two in midwifery (B.A.O. and M.A.O.), and a post-graduate diploma in public health. It also grants post-graduate diplomas in gynaecology and obstetrics, for which nine months' study is required, and in psychological medicine, for which twelve months' study is required. The degrees are granted to those who, having passed the professional examination, have also graduated in arts.

PROFESSIONAL EXAMINATIONS.

A candidate for the Final Examination for the M.B., B.Ch., and B.A.O. degrees must be a matriculated student of at least five years' standing. The examinations which students must pass are the Preliminary Scientific, the Intermediate Medical, and the Final. Before admission to any of these examinations students must have completed the courses of study in the subjects involved.

Preliminary Scientific.—This covers (*a*) chemistry, (*b*) physics, (*c*) botany and zoology; the three divisions may be taken together or at different times.

Intermediate Medical.—This is divided into two parts: (*a*) anatomy, physiology, organic chemistry, and histology; (*b*) applied anatomy and applied (clinical) physiology. The two parts may be taken separately or together.

Final Examination.—Part I: Hygiene and medical jurisprudence, pathology and bacteriology, materia medica and therapeutics. Part II: (*a*) Midwifery and gynaecology; (*b*) medicine and mental diseases; (*c*) surgery in all branches, including clinical ophthalmology. The three sections of Part II may be taken separately or together. In either case the full curriculum must have been completed, and the Final Examination cannot be completed before the end of the fifth year.

M.D.—The candidate must have passed all the qualifying examinations in medicine, surgery, and midwifery, and have taken, or have been qualified to take, the degree of B.A. three years previously. He must send in a thesis for approval. Subsequently the Regius Professor of Physic and an assessor will discuss with him questions connected with the thesis, and also examine him viva voce on other medical subjects of a more general nature.

M.Ch.—The candidate must be a B.Ch. of not less than three years' standing and have been engaged in practice for two years.

M.A.O.—The candidate must be a B.A.O. of not less than two years' standing and must produce satisfactory evidence of having been engaged for two years in the study of obstetric science. The examination is specially directed to obstetrics and practical gynaecology.

Further information regarding courses of instruction, etc., may be obtained from the Registrar of the School of Physic, Trinity College, Dublin.

QUEEN'S UNIVERSITY, BELFAST.

THE degrees granted by the Medical Faculty of this university are as follows: Bachelor of Medicine (M.B.), Bachelor of Surgery (B.Ch.), Bachelor of Obstetrics (B.A.O.), Doctor of Medicine (M.D.), Master of Surgery (M.Ch.), Master of Obstetrics (M.A.O.). The university also confers a diploma in public health. The first three degrees mentioned serve as a qualification for admission to the *Medical Register*, and are not granted separately. In addition to matriculating and passing his professional examinations, a candidate for these degrees must have passed three of the regulation five years as a student at the Belfast School of Medicine. Degrees in dental surgery (B.D.S. and M.D.S.) are conferred by the university, and also a diploma in dental surgery (L.D.S.) and a diploma in psychological medicine.

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., B.Ch., B.A.O. are four in number. The first deals with: (1) inorganic, organic, and practical chemistry, (2) experimental and practical physics, (3) botany and practical botany, (4) zoology and practical zoology. It is divided into two parts, of which botany and zoology form one. The Second Examination covers anatomy and physiology (both theoretical and practical), and may be taken at the end of the second year of the student's career. The Third Examination includes: (1) pathology and practical pathology, (2) materia medica, pharmacology, and therapeutics, (3) medical jurisprudence, and (4) hygiene. To be valid a certificate in regard to the study of the subjects of this examination must show that the work has been done after the Second Examination has been passed.

The Final Examination includes: (1) medicine, (2) surgery, (3) midwifery, (4) ophthalmology and otology. The student must pass in all subjects at once at the end of his fifth year, or he may divide the examination into two parts—namely, (1) systematic, (2) clinical, practical, and oral. The first part may be taken at the end of the fourth year, but for the second part the candidate may not present himself until the end of his fifth year, but students invariably take both parts at the end of their course. No certificate in regard to the study of the subjects of this examination will be valid unless the work was done subsequent to passing in all the subjects of the Second Examination.

THE HIGHER DEGREES.

Candidates for the degree of Doctor of Medicine must be graduates in medicine of at least three years' standing, unless they hold also a degree of the university in arts or science, in which case a standing of two academic years will suffice. Moreover, candidates must be able to show that the interval has been passed in the pursuit of such courses of study or practical work as may be prescribed. The degree may be conferred either (*a*) after a formal examination, or (*b*) in recognition of the merits of a thesis or of some piece of original study or research carried out by the candidate, followed by an oral or other examination in its subject. When an ordinary examination is imposed it will include (1) a written paper on the principles and practice of medicine, (2) a commentary on a selected clinical case, (3) a clinical and viva voce examination, and (4) a written paper and clinical or practical and viva voce examination on a subject chosen from the following list: (*a*) human anatomy, including embryology; (*b*) physiology, (*c*) pathology, (*d*) pharmacology and therapeutics, (*e*) sanitary science and public health, (*f*) forensic medicine and toxicology, (*g*) mental diseases. The regulations for the degrees of M.Ch. and M.A.O. are of the same general nature.

NATIONAL UNIVERSITY OF IRELAND.

THE National University of Ireland carries on most of its educational work through three constituent colleges—one in Dublin, one in Cork, and one in Galway. Each of these provides a full medical curriculum, and all candidates for the medical degrees of the university must pass three of their five years of study at one or other of them. These years do not count except after matriculation or recognition as a student of the Medical Faculty obtained in some other fashion. The candidates at each constituent college are examined by the university, and a common standard of education is secured by all courses of instruction and the regulations concerning them having to be approved by the Senate, after considering report thereon from the Board of Studies of the university. In addition to the ordinary degrees in medicine and surgery, the university grants those of Bachelor and Master of Obstetrics, Bachelor and Doctor of Science in Public Health, and Bachelor and Master in Dental Surgery, as well as Diplomas in Public Health, in Mental Diseases, and in Tropical Medicine.

Application for other information may be made to the Registrar, National University of Ireland, 49, Merrion Square, Dublin, C.17.

THE IRISH CORPORATIONS.

THERE are, in the Irish Free State, three licensing bodies other than the Medical Faculties of the universities; and in Dublin, just as in London, there is a Royal College of Physicians of Ireland, a Royal College of Surgeons in Ireland, and an Apothecaries' Hall. In Dublin, as in London and in Edinburgh, the two Colleges have formed an examining Conjoint Board, which is responsible for the recommendation of candidates to the two bodies for their respective licences. The Apothecaries' Hall of Ireland, like the Apothecaries' Society of London, gives its licence separately.

THE CONJOINT BOARD IN IRELAND.

THIS body requires of candidates either the passage of its own preliminary examination in the subjects of general education or proof that the candidate has passed one of the tests accepted by the General Medical Council as well as passing in the pre-registration examinations in chemistry and physics and biology.

PROFESSIONAL EXAMINATIONS.

There are three professional examinations, the first of which cannot be passed earlier than the end of the second winter session, nor the final before the conclusion of full five years of medical study. Before being admitted to any of them the candidate must show that he has studied the different subjects in practice and theory for the requisite periods, certificates to this effect being accepted from the authorities of most of the recognized medical schools at home and abroad. The first examination deals with (*a*) anatomy, and (*b*) physiology and histology. The second examination deals with (*a*) pathology, including morbid anatomy, clinical pathology, and bacteriology; (*b*) materia medica, pharmacy, and therapeutics; (*c*) forensic medicine, hygiene, and public health; (*d*) ophthalmology and aural surgery; and may be taken separately.

Final Examination.—This is divided into three divisions, which cannot be completed until at least five years have passed in medical studies other than those for the pre-registration examinations, and five years at least since the beginning of the curriculum. The divisions are: (*a*) medicine, including fevers, mental diseases, and diseases of children; (*b*) surgery, including operative surgery; (*c*) midwifery, including diseases of women and newborn children, and the theory and practice of vaccination.

Fees.—Preliminary Examination, £2 2s. Re-examination, £2 2s. Pre-Registration Examination, £3 3s. Re-examination in Chemistry, £2 2s.; in Physics, £1 1s. First Professional Examination, £26 5s.; Second, £9 9s.; Final, £6 6s. Re-examination fee is £2 2s. for each division.

Diploma in Psychological Medicine.

There are two examinations in connexion with this diploma: Part I consists of (*a*) anatomy and physiology of the nervous system, (*b*) psychology. Part II—(*a*) neurology, including clinical and pathological neurology; (*b*) psychiatry, or psychological medicine, including its legal relationships.

Fees.—£6 6s. for each part.

Further information can be obtained from Mr. Alfred Miller, Secretary of the Committee of Management, Royal College of Surgeons, St. Stephen's Green, Dublin.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

The Diploma in Public Health.

Every candidate for the Diploma in Public Health must observe the following rules:

Rule 1. A period of not less than two years shall elapse between the attainment by a candidate of a registrable qualification in Medicine, Surgery, and Midwifery and his admission to the Final Examination for a Diploma in Public Health.

Rule 2. The curriculum for the Diploma in Public Health shall extend over a period of not less than twelve calendar months subsequent to the attainment of a registrable qualification.

Rule 3. Every candidate shall produce evidence of having attended, during a period of not less than five months, at an institution approved by the Licensing Body granting the Diploma, practical instruction in—

(*a*) Bacteriology and Parasitology (including Medical Entomology), especially in their relation to diseases of man, and to those diseases of the lower animals which are transmissible to man;
(*b*) Chemistry and Physics in relation to Public Health;
(*c*) Meteorology and Climatology in relation to Public Health.

At least 180 hours must be devoted to Course (*a*), of which not less than 150 hours shall be occupied in practical laboratory work.

At least 90 hours must be devoted to Course (*b*), of which not less than 70 hours shall be occupied in practical laboratory work.

At least 10 hours must be devoted to Course (*c*).

Rule 4. Every candidate shall produce evidence of having received, during not less than 80 hours, at an institution or from teachers approved by the Licensing Body granting the Diploma, instruction in the following subjects:

(*a*) The Principles of Public Health and Sanitation (30);
(*b*) Epidemiology and Vital Statistics (20);
(*c*) Sanitary Law and Administration (including Public Medical Services) (20);
(*d*) Sanitary Construction and Planning (10).

[The numbers indicate the normal proportion of time to be given to each subject.]

Rule 5. Every candidate shall produce evidence that he has attended for three months on the clinical practice of a recognized Hospital for Infectious Diseases, and has received therein instruction in the methods of administration. At least thirty daily attendances of not less than two hours in each week shall be required.

Rule 6. Every candidate shall produce evidence that he has, during a period of not less than six months, been engaged in acquiring a practical knowledge of the duties, routine and special, of Public Health Administration under the supervision of a Medical Officer of Health, who shall certify that the candidate has received, from this Officer or other competent Medical Officer, during not less than three hours on each of sixty working days, practical instruction in these duties, and also those relating to:

(*a*) Maternity and Child Welfare Service;
(*b*) Health Service for Children of School Age;
(*c*) Venereal Diseases Service;
(*d*) Tuberculosis Service;
(*e*) Industrial Hygiene;
(*f*) Inspection and Control of Food, including meat and milk.

Certificates of having received the prescribed instruction in Public Health Administration must be given by a Medical Officer of Health who devotes his whole time to Public Health work; or by the Medical Officer of Health of a Sanitary Area having a population of not less than 50,000, or in Ireland the Medical Superintendent Officer of Health of a County or County Borough having a population of not less than 50,000.

Rule 7. The examination for the Diploma shall be divided into two parts, Part I and Part II.

Rule 8. The examination for Part I shall include the following subjects:

Bacteriology and Parasitology (including Medical Entomology);
Chemistry and Physics, and Meteorology and Climatology, in relation to Public Health.

Rule 9. The examination for Part II shall include the following subjects:

Hygiene and Sanitation (including Sanitary Construction);
Epidemiology and Infectious Diseases;
Sanitary Law and Vital Statistics;
Public Health Administration.

The examination shall be written and oral, and shall include practical examinations in Infectious Diseases; Food inspection; Inspection of premises—dwellings, factories, workshops, schools, etc.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THOSE whose names already appear on the *Medical Register* can obtain the separate Licence in Medicine of this College and its Licence in Midwifery. In either case an examination has to be passed in the subjects indicated, questions on midwifery, hygiene, and jurisprudence being included in the examination for the Licence in Medicine. For the Licence in Midwifery practitioners of over five years' standing are exempted from examination by printed questions. The other grades of the College are Members and Fellows. The former are admitted after an examination which is open to all university graduates in medicine and Licentiates in medicine of the Royal College of Physicians, and deals with the general subjects of medicine. Fellows are selected, by vote, from among the Members of the College.

Fees.—For the Licence in Medicine, 15 guineas; Special Examination, £21. For the Licence in Midwifery, 8 guineas; Special Examination, 16 guineas. For the Membership, 20 guineas to a Licentiate of the College, 35 guineas to others; a special examination costs 10 guineas extra. The Fellowship, £35, in addition to stamp duty, £25.

Information as to special examinations and other matters can be obtained from the Registrar, the Royal College of Physicians, Kildare Street, Dublin.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THIS body, besides granting a Licence in Surgery, admits those possessed of registrable surgical qualifications to its Fellowship under certain conditions. Its Licence is usually granted conjointly with that of the College of Physicians, but it is given separately to holders of a registrable qualification in medicine, provided the College is satisfied that adequate courses of study have been pursued, and provided its own provisional examination is passed. This examination is held on its behalf by the Conjoint Board, and is identical with the ordinary surgical portion of the examinations imposed by that body.

The Fellowship.—Candidates for the Fellowship must pass two examinations, of which the first is in anatomy (including dissections), physiology, and histology; and the second in surgery (including surgical anatomy) and pathology. Both examinations are partly written, partly practical, and partly viva voce; while the final examination includes the performance of operations. All subjects of either examination must be passed at one time, and in neither can a candidate be admitted who has been rejected in any of its subjects by any other licensing body within three months. Candidates are not admitted to the Primary Examination except on evidence that they have already passed an examination in anatomy, physiology, and histology, held by some university or other body whose degrees or licences entitle the holder to admission to the *Medical Register*; if, however, the candidate's name is on the Colonial or Foreign List in the *Medical Register*, at the discretion of the Council. Candidates for the Final Examination must be over 25 years of age, produce a certificate of general good conduct signed by two or more Fellows of the College, and, if successful, must make a declaration before admission to the effect that they do not conduct dispensing practices, and will not do so as long as they are Fellows.

Fees.—Candidates for the Licence pay 5 guineas for examination, which sum, if they pass, is counted as part of the fee payable on admission to the Licence, this being 25 guineas. Candidates for the Fellowship pay 5 guineas for each examination, the total of 10 guineas being reckoned as part of the fee payable on admission to the Fellowship. That fee is 25 guineas in the case of those who are already Licentiates, and 40 guineas in the case of others.

APOTHECARIES' HALL OF IRELAND.

A DIPLOMA is granted by this Hall which entitles the holder to be registered as a practitioner of medicine, surgery, and midwifery, and confers also the privileges of an apothecary. Women candidates are eligible.

Fees.—Primary Examination (Parts I and II), £21; Final Examination, £21. Subjects of examination: Primary, Part I, Anatomy and Physiology. Primary, Part II, Materia Medica, including Pharmacy; Medical Jurisprudence and Hygiene; Pathology. Final Examination: Medicine, Surgery, and Midwifery. Candidates must enter for and pass at the one time in Anatomy and Physiology. They are at liberty to enter for the subjects of the Final Examination at separate times, but the Final Examination cannot be completed until a period of three years has elapsed from the date of passing Primary Examination, Part II.

Application for other information should be made to the Registrar, 95, Merrion Square, Dublin.

MEDICAL SCHOOLS AND COLLEGES.

LONDON.

INFORMATION as to the fees at each of the various metropolitan medical schools, and the scholarships, prizes, and junior appointments which they offer, will be found in the following pages. The courses they provide are fundamentally the same, and in all of them the arrangements made are such as to meet the requirements of students of every class—of those who are aiming at the diplomas of the English Conjoint Board or the Apothecaries' Society, not less than of those who have London or other university degrees in view. At all, too, special facilities are offered to students who have commenced their professional education at Oxford or Cambridge, and are seeking the medical degrees of those universities.

CHARING CROSS HOSPITAL.

THIS school, with its hospital, is situated in the centre of London, and is easily accessible. Primary and intermediate students attend lectures and practical work at King's College. The final studies are taken in the school and hospital, where systematic lectures, demonstrations, and tutorial classes are arranged to cover all the subjects necessary for the qualifying examinations. Departments are also available for the other final subjects of bacteriology, clinical pathology, biochemistry, materia medica, public health, operative surgery, and for research work. An Institute of Pathology, with a whole-time staff of scientific workers and fully equipped laboratories, has been established in the school. Students receive their training in preventive medicine, pathology, and bacteriology here, and are encouraged to undertake research.

A number of scholarships and exhibitions are awarded to university and other students, particulars of which can be obtained from the Dean.

Fees.—The fees are as follows: Entrance, Primary and Intermediate, 10 guineas; Final, 8 guineas. Annual, 38 guineas.

Further information may be obtained on application to the Dean of the Medical School, Charing Cross Hospital, London, W.C.2.

GUY'S HOSPITAL.

THE hospital contains 646 beds in constant occupation. Twenty-five beds are set apart for diseases of the eye, and 42 for the most urgent and interesting medical cases, which form the subjects of the weekly clinical lectures. There are special wards of 49 beds for the reception of cases of diseases of women and for cases of difficult labour. Beds are also allotted to the throat and ear departments, the departments of orthopaedics, neurology, and dermatology, the department for the treatment of diseases of the genito-urinary system, and the children's department; there are also some special beds for the treatment of syphilis.

The residential college fronts the east gate of the hospital, providing accommodation for resident students. This contains a dining hall, reading rooms, a library of general literature, and a gymnasium for the use of the residents and of the members of the Clubs Union. The athletic ground at Honor Oak Park is reached from the hospital in fifteen minutes. The Gordon Museum of Pathology, the Wills Library, the departments of chemistry, physics, pathology, and pharmacology, and the school buildings in general, afford opportunities for a liberal education and for research, and provide the full curriculum for all medical degrees and diplomas. New departments of anatomy, physics, and biology have recently been completed. They are equipped on the most modern lines, and provide ample accommodation for teaching and research. Special classes are held for the First and Second Examinations for medical degrees of the University of London, for the pre-medical examination, and for the First and Final F.R.C.S.Eng Examinations. Special teaching is provided to meet the requirements of the Universities of London, Oxford, and Cambridge in general pathology and pharmacology.

Appointments.—All appointments are made according to the merits of the candidates, as determined by a committee of the medical staff. Sixteen out-patient officers, eight house-physicians, twenty assistant house-surgeons, eight house-surgeons, two ophthalmic house-surgeons, two genito-urinary house-surgeons, two house-physicians (children's department), two house-physicians (dermatological and neurological), and nine resident obstetric assistants are appointed annually. The house-physicians and house-surgeons, obstetric residents, ophthalmic house-surgeons, and genito-urinary house-surgeons hold office for six months each, and receive free board and lodging in the college. Every student is provided with rooms and commons in the hospital during the period of his "take in" as senior dresser. In addition to the clerkships and dresserships in the medical and surgical wards, students are appointed to the posts of clinical assistant dresser, or clerk in the special departments of ophthalmology, laryngology, gynaecology, diseases of children, diseases of the nervous system, dermatology, otology, actinotherapeutics, anaesthetics, dentistry, orthopaedics, vaccine, tuberculosis, fractures, and genito-urinary and venereal disease; clinical assistantships in the various special departments are open to post-graduates.

Scholarships, Prizes, etc.—The following scholarships in Arts and Science are awarded. A. Open Junior Scholarships: (1) An Arts Scholarship of the value of £100, (2) a Science Scholarship of the value of £100; these are awarded annually in June or July. (3) A War Memorial Scholarship of the value of £200, awarded alternately in Arts and Science. This scholarship is open every other year; the next award will be made in June or July, 1932 (in Arts). B. Confined Scholarship in Science. A Junior Science Scholarship of the value of £100 is offered for competition annually in June or July to candidates who have attended the preliminary science classes at this school. Candidates for these scholarships (male students only) must be under 20 years of age on August 1st of the year of the competition. C. Open Senior Science Scholarships: (1) A War Memorial Scholarship of the value of £100, (2) an Open Scholarship of the value of £80; both of these are awarded annually in September. Full particulars as to the scholarships may be obtained from the Dean of the Medical School. Junior prizes for general proficiency, £20, £15, £10; Hilton Prize for dissection, £5; Michael Harris Prize for anatomy, £10; Sands-Cox Scholarship for physiology, £15 for three years; Wooldridge Memorial Prize for physiology, £10; Beaney Prize for pathology, £34; Treasurer's Gold Medal in medicine, Treasurer's Gold Medal in surgery, and the Golding-Bird Gold Medal and Scholarship in bacteriology (£20), are awarded annually after competitive examination. The Gull Studentship in pathology, of the value of £2[illegible] per annum, the Beaney Scholarship in materia medica, of the value of about £50, and the Anderson Demonstratorship in clinical chemistry, value £175 per annum, are awarded without examination to enable research to be carried on in these subjects. An Arthur Durham Travelling Scholarship of £100 is awarded triennially. The Griffiths Demonstratorship in Pathology, of the value of £320 per annum, and the Hilda and Ronald Poulton Fellowship, value £150 per annum, are awarded without examination.

An annual composition fee is paid by all students until a registrable qualification is obtained. Further information may be obtained from the Dean of the Medical School, Guy's Hospital, London Bridge, S.E.1.

KING'S COLLEGE HOSPITAL.

THE medical school of this hospital, which is situated at Denmark Hill, deals with the Final Examination subjects of the medical curriculum. The hospital was opened in 1913, and is one of the most modern and best equipped in England. The number of attendances in the casualty and out-patient departments during the year 1929 amounted to 283,136. In the education at the hospital a special feature has always been the individual attention given to each student. The studies are co-ordinated under the direction of senior members of the honorary staff, assisted by medical, surgical, obstetric, and pathological tutors.

The Hall of Residence for members of the medical school is situated on Champion Hill. Both the Hall and the athletic ground are within ten minutes' walk of the school.

Appointments.—Sixteen resident medical and surgical officers are appointed half-yearly, as well as dressers and clerks in the wards, out-patient departments, post-mortem rooms, and special departments. Each of the special departments has several clinical assistants. There are five registrars and four tutors, all of whom receive salaries. The Clubs and Societies Union combines athletics, music, and other societies connected with the school, and provides also a common room.

Scholarships, etc.—At entrance: Science Scholarship, £75. At commencement of Final Studies: Anatomy and Physiology Scholarship, £75; Pathology Scholarship, £75; two Raymond Gooch Scholarships, each £60 a year for two years; two Burney Yeo Scholarships, each £80 (for Oxford and Cambridge students); Seaman Scholarships, £50 a year up to five years; Epsom College Scholarship, £100; Senior Scholarship, £40; Todd Prize, Tanner Prize, Ferrier Prize in Neurology, Class Prizes and Medals.

Fees.—The composition fee is 93 guineas if paid in one sum. Entrance fee of 10 guineas includes membership of the Clubs and Societies Union.

Dental School.—This school was opened in October, 1923, and provides complete courses for dental degrees and diplomas. The director of dental studies is Dr. A. Livingston, M.B., Ch.B., M.D.S., L.D.S.

The calendar of the school can be obtained on application to the Dean, H. Willoughby Lyle, M.D., F.R.C.S., or to the Secretary of the Medical School, S. C. Ranner, M.A., King's College Hospital, Denmark Hill, S.E.5.

THE LONDON HOSPITAL.

THIS hospital, with its medical college and dental school, is situated in the Mile End Road, E.1. The hospital contains 839 beds, which are in constant use. During 1929, 13,922 patients passed through the wards and 89,972 out-patients

received treatment. Of the latter number, 39,226 received treatment in the departments for diseases of the ear, nose, throat, eye, skin, and teeth, and in the paediatric, orthopaedic, venereal, radiological, electro- and physico-therapeutical, and inoculation departments. The number of major operations which were performed amounted to 7,422.

The hospital presents, therefore, a large field for clinical instruction, and in its wards and out-patient and special departments exceptional opportunities are afforded for acquiring an extensive and practical experience of all phases of disease.

A clinical unit in medicine, under the charge of a whole-time director, assisted by an assistant director, two assistants, and two house-physicians, provides for the more elaborate methods of diagnosis and treatment, and takes a leading part in the initiation and co-ordination of medical research. To each medical and surgical firm throughout the hospital there is attached a first assistant, who is responsible for instructing the clerks or dressers of the firm in elementary medicine and surgery, and who assists the honorary members of the firm in the preparation of their demonstrations. In the department of obstetrics and gynaecology there are two assistants and two resident accoucheurs. Special courses of lectures and demonstrations are arranged in medicine and surgery and in their ancillary subjects. Opportunities for research are provided under the supervision of the staff.

All the departments are modern and adapted for the teaching of all subjects in the various curricula. Special courses of instruction are held in preparation for the examinations of the University of London, for the Fellowship of the Royal College of Surgeons, and for the Membership of the Royal College of Physicians. Special entries can be made for the medical and surgical practice of the hospital. Two resident hostels are provided for the convenience of students and the holders of house appointments. Recent additions to hospital and college buildings include a laboratory for the manufacture of certain preparations of radium. The athletic ground, of over thirteen acres, is at Higham's Park, and is open to all members of the Clubs Union.

Appointments.—The salaried appointments, open to past students of the hospital are those of assistants to the medical unit; first assistants to the medical and surgical firms; obstetric registrar; assistants to the department of obstetrics and gynaecology; medical, surgical, and obstetric tutors; clinical assistants in the medical, surgical, ophthalmic, aural, light and skin, orthopaedic, and electrical departments, and in the Institute of Pathology. There are appointed annually 4 resident accoucheurs, 14 resident house-physicians and 22 resident house-surgeons, 14 resident receiving-room officers, 8 resident emergency officers, 8 clinical assistants to the medical out-patient department, and 16 clinical assistants to the surgical out-patient department, also paid and unpaid clinical assistants in the various special departments. In addition, there are numerous assistantships, clerkships, and dresserships in the departments of medicine, surgery, gynaecology, and obstetrics.

Scholarships and Prizes.—The following is a list of scholarships and prizes:—At entrance: Price Scholarship in science, £100. Two open scholarships, each of the value of £100. Scholarships open to students of Oxford and Cambridge Universities: (1) £100, anatomy and physiology; (2) £100, pathology. Entrance Scholarship in science, £50; Epsom Scholarship, "free medical education." After entrance: Buxton Prize in anatomy and physiology, £40; Letheby Prizes in organic chemistry and chemical pathology, £25; Prizes in clinical medicine, surgery, and obstetrics and gynaecology, £20 each; Duckworth Nelson Prize in practical medicine and surgery, £10; Hutchinson Prize in clinical surgery, £60; Treves Prize in clinical surgery, £15; Sutton Prize in pathology, £20; K. E. D. Payne Research Scholarship in pathology, £20; Sir Andrew Clark Prize in clinical medicine and pathology, £14; T. A. M. Ross (prox. acc.) Prize in clinical medicine and pathology, £10 10s.; Anderson Prizes in elementary clinical medicine, £20; Dressers' Prizes, £20; Practical Anatomy Prizes, £10; Arnold-Thompson Prize in medical and surgical diseases of children, £15; Liddle Prize, £120; Francis Farmer Entrance Scholarship in chemistry and physics, £25; Harold Fink Prize in dental surgery, £8 8s. The "London" Prizes in dental surgery and pathology, £5 5s., and in dental prosthesis, £5 5s. Seven class examination prizes, each of the value of £3 3s., are offered for competition at the end of the courses of lectures in the dental curricula. Funds to the value of over £113,000 permit of financial assistance being given to students and graduates engaged in medical research.

Fees.—Entrance fee, 20 or 15 guineas, according to examinations passed; annual fee, 40 guineas.

Full information may be obtained from the Dean at the London Hospital Medical College, Mile End, E.1.

THE MIDDLESEX HOSPITAL.

THE school and hospital are in Mortimer Street, W.1, close to Oxford Circus, Goodge Street, and Great Portland Street stations. There are a gymnasium, common rooms, and restaurant within the hospital precincts, and an athletic ground within easy reach. The hospital contains over 450 beds, including a wing containing 92 beds for patients suffering from cancer. There are special wards for maternity and gynaecological cases, for mental cases, for cases of venereal disease, and for diseases of children and of the skin and eye. The newly built west wing and residents' house are now occupied.

The medical school, which includes the Bland-Sutton Institute of Pathology, the S. A. Courtauld Institute of Biochemistry, and the Barnato-Joel Laboratories, is completely equipped for teaching the entire medical curriculum, including the pre-medical subjects, chemistry, physics, and biology. The Bland-Sutton Institute, under the charge of the Professor of Pathology, contains large pathological and public health laboratories, and smaller rooms for original investigation as well as a pathological and anatomical museum. Bacteriological, chemical, and microscopical examinations of material from the wards, operating theatres, and out-patient departments are carried out in the laboratories, and senior students are eligible for clerkships in connexion with this work. Junior assistants in the pathological and bacteriological laboratories are elected annually from recently qualified students. Every facility is given for original research. The Biochemical Institute is under the charge of the Professor of Biochemistry, and contains teaching and research laboratories in addition to those devoted to the routine clinical work of the hospital. The Barnato-Joel Laboratories offer unrivalled opportunities for the study of cancer in both its clinical and pathological aspects.

Appointments.—Twenty-six resident appointments are open annually for competition among students of the hospital. The officers reside and board in the residential college free of expense. Two casualty medical and two casualty surgical officers, and three resident officers to the special departments, are appointed annually. Eight house-surgeons are appointed every year at intervals of two months, after examination; six house-physicians are also appointed annually at similar intervals. An obstetric and gynaecological house-surgeon is appointed every six months. Ten registrars are appointed annually. In the out-patient departments the appointments are: clerk and dresser to the physicians and surgeons to out-patients; clerk in the departments for diseases of the skin and nervous diseases; dressers to the department for diseases of women, to the ophthalmic surgeon, to the throat and ear department, and to the dental surgeon. Extern midwifery clerks and post-mortem clerks are also appointed. The appointments are so arranged that every student may, during his course, hold all the out-patient and in-patient clerkships and dresserships. Students must have held an out-patient clerkship and dressership before holding in-patient clerkships or dresserships. Non-resident qualified clinical assistants are appointed in the medical, surgical, skin, neurological, ophthalmic, throat and ear, odontological, children's, and electro-therapeutic out-patient departments.

Scholarships.—There are two Entrance Scholarships, value £100 each. Two annual Entrance Scholarships, of the value of £90 and £60 respectively, are open to students of the Universities of Oxford and Cambridge who have completed the curriculum for, or passed the examinations in, anatomy and physiology. Students joining the school in the previous April are eligible. The Freer Lucas Scholarship is annually awarded on the nomination of the headmaster to a pupil of Epsom College who has passed the first examination for medical degrees (Preliminary Scientific Examination). There is also a scholarship, value £50, awarded annually to students from New Zealand. In addition to the Entrance Scholarships, there are numerous other valuable scholarships, prizes, and exhibitions open to students of the hospital, including the Brodrip Scholarships, value £60 and £40; Lyell Gold Medal and Scholarship, value £55 5s.; Freeman Scholarship, value £30; John Murray Gold Medal and Scholarship, value £25; Hetley Clinical Prize,

value £25; Leopold Hudson Prize, value 11 guineas; and the Second Year's Exhibition, value 10 guineas.

The rebuilding of the hospital is being carried out without the loss of a single bed, or any disorganization of its clinics.

Fees.—(*a*) Pre-medical students: For one year or less, £21. (*b*) Students who have completed the Preliminary Science course: Entrance fee, 25 guineas, payable on joining the medical school; five annual fees of £45. The annual fee for further attendance at the medical school, if a registrable qualification has not been obtained, is £23. (*c*) Oxford and Cambridge and other students who have completed the Intermediate course: entrance fee, 15 guineas; three annual fees of £45; further annual fees as above. These fees are inclusive and cover the cost of instruction in vaccination, fevers, etc., and also the subscription to the amalgamated clubs and hospital journal.

Further information may be obtained from the Dean or the School Secretary.

ST. BARTHOLOMEW'S HOSPITAL.

THIS institution fills one side of Smithfield and Giltspur Street, covering the greater part of a large island of ground separated practically from all other buildings; it is on the edge of the City, and easily reached from all parts of London. The hospital contains 757 beds. Extensive buildings, opened in July, 1907, occupy part of the ground acquired from the old Bluecoat School, and these materially enhance the attractions of the hospital as a place of medical study. The medical school buildings, including the library, the museum, and the chemical, biological, and anatomical departments, have now at their side a very large building, which includes club rooms for the Students' Union, a writing room, luncheon and dining halls, new quarters for the resident staff, and an out-patient department and accommodation for special departments of such large size as to be unsurpassed by any hospital in the kingdom. During the year 1909 a second block of new buildings was completed. These form the pathological department, and include, in addition to an extensive post-mortem room, large and well-equipped laboratories for clinical pathology, pathological histology, bacteriology, and chemical pathology, altogether forming the most complete pathological department in the country. A further large block in Giltspur Street was acquired in 1923, and has been equipped by the construction of new lecture theatres and extensive laboratories for physics, chemical physiology, experimental physiology, histology, and pharmacology. The new block of surgical wards and five operation theatres (one attached to each surgical unit), with accommodation for 250 patients, was opened in June, 1930. One of the old blocks previously used for surgical cases has been reconverted for the housing of an enlarged gynaecological and obstetrical unit, with separate operation theatres attached. The Students' Union owns grounds of some ten acres in extent for recreative purposes at Winchmore Hill, which is easily accessible from the hospital.

Special classes are held for students preparing for the Preliminary Scientific and other examinations, for the M.B., M.D. of the Universities of Oxford, Cambridge, and London, and for the higher surgical degrees at the same universities, including the M.Ch.Oxon., M.Chir.Cantab., M.S.Lond., and F.R.C.S.Eng.

Clinical Units.—Special clinical units have been established in medicine and surgery, each under the charge of a professor and director, who devotes the whole of his time to the purpose of hospital practice, teaching, and research. In each unit there are an assistant director and four assistants, for whom special laboratory accommodation has been provided by a gift from the Sir William Dunn Trustees. The appointments of clerks and dressers are open to all students in these departments, and arrangements are made for all students to study in these units during a part of their clinical course.

Appointments.—Clinical clerks to the physicians and to the physician-accoucheur, and dressers to the surgeons and in the casualty department, are chosen from the students; clerks and dressers are also selected from the students to attend in the out-patient rooms, in the special departments (ophthalmic, orthopaedic, gynaecological, children's, laryngological, aural, dermatological, venereal, electrical, and dental), and in the post-mortem room. Chief assistants and clinical assistants are selected from qualified men appointed yearly to help in the general medical, surgical, and in special departments. Ten house-physicians and ten house-surgeons are appointed annually. During their first six months of office they act as "junior" house-physicians and house-surgeons, and receive a salary of £80 a year. During their second six months they become "senior" house-physicians and house-surgeons, and are provided with rooms by the hospital authorities, and receive a salary of £80 a year. A resident midwifery assistant, an ophthalmic house-surgeon, a house-surgeon to the skin and venereal department, and a house-surgeon for diseases of the throat, nose, and ear are appointed every six months, and are provided with rooms and receive a salary of £80 a year. Three resident administrators of anaesthetics are appointed—the senior for one year at a salary of £150, and two juniors for six months with a salary at the rate of £80 per annum—and all are provided with board and rooms. An extern midwifery assistant is appointed every three months, and receives a salary of £80 a year.

Scholarships.—Four Entrance Scholarships are annually awarded after examinations held in September. The subjects of examination and conditions of eligibility for these scholarships are: (1) One scholarship, value £75, in not fewer than two and not more than three of the following subjects: chemistry, physics, botany, zoology, physiology, pathology, and anatomy, limited to students under 25 years of age who have not entered on the medical or surgical practice of any London medical school. (2) One scholarship, value £100, in not fewer than three of the following subjects: chemistry, physics, botany, zoology, and physiology, limited to students under 21 years of age who have not entered on the medical or surgical practice of any London medical school. (3) An entrance scholarship in arts, of the value of £100, in mathematics; Latin or Greek, or French or German; a second language or chemistry or physics. (4) The Jeffreson Exhibition in the same subjects as No. 3—of the value of £50. Candidates for Nos. 3 and 4 must be under 19 years of age. The total value of the scholarships and prizes is over £1,200 annually.

Further information and a handbook can be obtained on application to the Dean of the Medical College, St. Bartholomew's Hospital, E.C.1.

ST. GEORGE'S HOSPITAL.

THIS school is at Hyde Park Corner, and is carried on in connexion with St. George's Hospital, an institution having a service of 436 beds, of which 100 are at the convalescent hospital at Wimbledon. It provides for the instruction of its students in the preliminary and intermediate subjects of the curriculum at the teaching centre of London University established at King's College. The school at Hyde Park Corner is devoted entirely to the teaching of clinical subjects, great attention being paid by the members of the staff to individual teaching. A number of special courses are given, in which the requirements of university and all other examinations receive careful attention.

The St. George's Hospital Club consists of an amalgamation club, with smoking and luncheon rooms on the hospital premises, and other students' clubs, with an athletic ground at Wimbledon. Students have the advantage of a well-filled library of medical and scientific books. A register of accredited apartments and a list of medical men and others willing to receive St. George's men as boarders may be seen on application to the Dean.

Appointments.—Two house-physicians, two house-surgeons, and two casualty officers are appointed every two months. The house officers reside and board in the hospital free of expense. The casualty officers are non-resident, and receive salaries at the rate of £100 per annum. After the student has held a house appointment, the following are, among others, open to him: assistant resident physician at £250 per annum; assistant resident surgeon at £250 per annum; medical officer to the Atkinson Morley Convalescent Hospital at £300 per annum; medical registrarship at £200 per annum; surgical registrarship at £200 per annum; medical officer to the biochemical department at £100 per annum; assistant curatorship of the museum, £100 per annum; obstetric assistantship, resident, at £100 per annum; the post of resident anaesthetist at £100 per annum; the posts (three) of junior anaesthetist, each at £30 per annum.

Scholarships.—The following Entrance Scholarships and Exhibitions in anatomy and physiology and in general pathology are awarded in July to candidates who have passed the second M.B.London or corresponding examination; Senior William Brown Exhibition of the value of £120; Junior William Brown Exhibition of the value of £80; Anne Selina Fernee Scholarships (two) of the value of £80 each; Devitt-Pendlebury Scholarship of the value of £50; and Exhibitions, each of the value of £40 and up to six in number. Other prizes to the value of £200 are awarded annually to the students of the hospital.

Fees.—First year (First M.B. or pre-medical course), £36 15s.; second and third years, £42 each. For the course of clinical study, in the fourth and subsequent years, entrance fee, £10 10s.; annual composition fee, £42. No entrance fee is payable by St. George's students who have studied at King's College.

Further information may be obtained from the Dean of the Medical School.

ST. MARY'S HOSPITAL.

THIS hospital and medical school are situated close to Paddington Station (G.W.R.), having on one side a poor district of 500,000 persons, and on the other side the residential district of Kensington and Bayswater. The hospital contains 348 beds, and extensions recently completed have provided two new operating theatres. By a scheme of affiliation, for teaching purposes, of several neighbouring hospitals, the teaching facilities extend over 1,000 beds. By arrangement with the Lock Hospital, students take the courses of instruction in venereal diseases there. The athletic ground (ten acres) is situated at Wembley, and can be reached in twenty minutes by a constant service of trains.

Clinical Facilities.—Clinical units in medicine and surgery were established in 1920, and have now been formally recognized by the University Grants Committee, St. Mary's being one of the six medical schools in London which enjoy this privilege. Under this system professors of medicine and surgery, with competent assistants, give their whole time to teaching and research. This means a regularity of teaching and a degree of individual attention that are only possible where units exist. The system also provides additional salaried posts which are open to students after qualification.

Teaching of Midwifery.—The hospital has lying-in beds, and in addition to the instruction thus obtained each student attends a short course at Queen Charlotte's Hospital as part of his training in midwifery, without additional fee. Under the new building scheme it is proposed to institute additional lying-in wards.

Institute of Pathology and Research.—Students specially interested in pathology and bacteriology have singular advantages at St. Mary's. The Institute comprises seven special departments, the whole being under the personal direction of Sir Almroth Wright, F.R.S. Research scholarships of £200 each are awarded annually to students working in the departments of the Institute; and research beds are provided. Clerkships in pathology and bacteriology and chemical pathology, lasting for a period of three months, are open to students of the fifth year, and enable them to carry out the pathological and bacteriological investigations of the wards, and learn the necessary technique under supervision. Seventy-two of these posts are available annually. Numerous appointments are open to newly qualified members of the medical school, including ten salaried posts, with salaries varying from £200 to £750 per annum.

Rebuilding of the Medical School.—The site for the rebuilding of the medical school and inoculation department has already been cleared, and building operations will be commenced shortly. The new school will contain departments for the teaching of all preliminary and intermediate subjects, and will include a students' club, dining and billiard rooms, and a gymnasium and swimming bath.

Complete Curriculum.—The medical school provides complete courses of instruction, and students can join at once on passing a preliminary examination in arts. Terms begin in October, January, and April.

Entrance Scholarships.—Two Entrance Scholarships of £210 each and one of £26 5s. are awarded annually in July by nomination on the lines of the Rhodes Scholarships. The Geraldine Harmsworth Scholarship (£200) and one or more University Scholarships of £200 are awarded annually in July.

Fees.—Composition fees for entire curriculum (6 years), £205 in one sum, or £215 by five annual instalments. Composition fee for clinical curriculum (3 years), 95 guineas in one sum, or 100 guineas by two annual instalments. As an alternative, students may pay an annual fee of 40 guineas, with an entrance fee.

ST. THOMAS'S HOSPITAL.

THIS school and hospital are situated in Lambeth, on the south bank of the Thames, facing the Houses of Parliament, and form one of the well-known architectural features of London.

The school buildings, which are separated from the hospital by a quadrangle, comprise lecture theatres, laboratories, and classrooms well adapted for the modern teaching of large bodies of students in the subjects of the medical curriculum. A splendid library and reading room and a complete museum are open to all students from 9 a.m. to 5 p.m., on Saturdays to 1 p.m. St. Thomas's House, the new Students' Club recently opened, comprises spacious dining and club rooms, etc., and provides accommodation for some sixty resident students. The terrace affords facilities for exercise and recreation. The sports ground, more than nine acres in extent, is at Chiswick. It can be reached in forty minutes from the hospital; it is admirably adapted for football, cricket, lawn tennis, and athletic sports.

The hospital proper contains 644 beds. In addition to the ordinary provisions of a great hospital there are connected with the out-patient department physicians' and surgeons' rooms provided with ample sitting accommodation, so that students are enabled to follow closely the practice and teaching of the out-patient staff. There is a full complement of special departments, and connected with the hospital a special tuberculosis department gives opportunity for instruction of students. There is a clinical theatre, centrally situated, so as to facilitate the illustration of lectures by patients from the wards and out-patient room; it is arranged also for lantern demonstrations. Clinical units in medicine and surgery have been established. The maternity ward, containing 21 beds, gives students full facilities for maternity training, under supervision, within the precincts of the hospital. This obviates any necessity for supplementary instruction elsewhere, and fully prepares the student for the extern maternity practice of the hospital district. The revised regulations of the examining bodies can thus be fully complied with.

Appointments.—All hospital appointments are open to students without charge. A resident assistant physician and a resident assistant surgeon at £225 each per annum, and a resident anaesthetist at £200 per annum, are appointed annually. Eight hospital registrars—three medical, one diseases of children, and four surgical—at an annual salary of £250 each, rising by £25 to £300, are appointed yearly. The tenure of these offices may be renewed for a term not exceeding three years. A pathological registrar to the department of obstetrics and gynaecology (at an annual salary of £250), an ophthalmic registrar (at an annual salary of £200), and an orthopaedic registrar (unpaid) are appointed yearly. Ten resident casualty officers and anaesthetists (including two senior) are appointed every six months. Seven house-physicians (including two obstetric house-physicians and one house-physician to the department of diseases of children) and nine house-surgeons (including two ophthalmic house-surgeons, one orthopaedic house-surgeon, and two house-surgeons to the ear, nose, and throat department) are appointed every six months. Thirty-six or more clinical assistants in the special departments are appointed every three months, and hold office for six months if recommended for re-election. Clinical clerkships and dresserships to the in-patient and out-patient departments are available to the number of 400 each year.

Scholarships.—There are five Entrance Scholarships: one in arts, giving two years' free tuition; one of £150 and one of £60, in chemistry, physics, and biology, for students who have not received instruction in anatomy or physiology; one of £100, and an exhibition worth £40, in any two of the following subjects: anatomy, physiology, chemistry, or pathology, for students who have completed their examinations in anatomy and physiology for a medical degree in any of the universities of the United Kingdom or the Colonies, and have not entered as clinical students in any London medical school. The money value and subjects of examination of the remainder are as follows: (*a*) William Tite Scholarship for second-year students, £25; (*b*) and (*c*) Musgrove Scholarship or (alternately) Peacock Scholarship, each for third-year students and tenable for two years, £35 each; (*d*) Mead Medal, medicine, pathology, and hygiene; (*e*) Wainwright Prize, medicine; (*f*) Toller Prize, medicine; (*g*) Cheselden Medal, surgery and anatomy; (*h*) Clutton Memorial Medal in clinical surgery, biennial; (*i*) Beaney Scholarship, £50 biennially, surgery and clinical pathology; (*j*) Solly Medal and Prize, biennally, reports of cases; (*k*) Sutton Sams Prize, biennially, reports of cases; (*l*) Bristowe Medal, pathology and morbid anatomy; (*m*) Hadden Prize, pathology and morbid anatomy; (*n*) Grainger Testimonial Prize, £31 10s., anatomy and physiology; (*o*) Louis Jenner Research

Scholarship, tenable for two years, £60 annually, pathology; (*p*) School Council Research Scholarship, £250 per annum; (*q*) John and Temple Research Scholarship, value £450 per annum (children).

Fees.—The annual fees are: For each year of study, £50. These fees cover all tutorial classes, but do not include instruction in infectious fevers.

Special courses of instruction are given for various examinations. Further information may be obtained from the Medical Secretary of the School, St. Thomas's Hospital, Albert Embankment, S.E.1.

University College Hospital.

THE school, which forms part of the corporation of University College Hospital, is in immediate proximity to the hospital in University Street, and opposite University College. It comprises departments of medicine, surgery, midwifery and gynaecology, pathology including morbid anatomy, chemical pathology, biochemistry and bacteriology, cardiography, forensic medicine, mental physiology and mental diseases, dental surgery, practical pharmacy, and other departments for the study of special diseases, such as those of the eye, skin, ear and throat, venereal diseases, and for instruction in anaesthetics, electro-therapeutics, and skiagraphy. The hospital and school have acquired the National Dental Hospital and College as their dental departments, thus providing every facility for the study of dental subjects. The Royal Ear Hospital has also been amalgamated as the Ear, Nose, and Throat Department, and a new hospital for in- and out-patients, close to University College Hospital, is completed.

The school thus provides the final course of study for the degrees of the Universities of Oxford, Cambridge, London, Durham, and other British universities, and for the diplomas of the Royal Colleges of Physicians and Surgeons in medicine and in dental surgery, and the Licence of the Society of Apothecaries. Each department is also equipped for more advanced work, and provides facilities for research.

Clinical units in medicine, surgery, and obstetric medicine are now in operation. The whole-time directors of the units are concerned with the organization of the teaching generally, but the honorary staff is responsible for the largest share of the teaching in the wards and out-patient department of the hospital.

The new buildings of the obstetric hospital of 74 beds (rendered possible by the Rockefeller benefaction), the new Residents' House (with accommodation for 33 residents and students), the extension of the Nurses' Home, and the new research laboratories for the Medical School, are now finished and in full occupation.

Appointments.—The qualified appointments, in addition to a number of posts as house-physicians and house-surgeons and obstetric assistants, include the appointments of resident medical officer, medical registrars, surgical registrar, obstetric officer, Harker Smith radium registrar, ophthalmic registrar, casualty medical officers, casualty surgical officers, assistants in ear, nose and throat, skin and venereal diseases departments, and house anaesthetists.

Scholarships.—The following scholarships and prizes are open to competition: Two Entrance Exhibitions of 112 guineas each, awarded after a competitive examination in any two of the following subjects: anatomy, physiology, or general pathology: Radcliffe Crocker Travelling Scholarship in dermatology for one year, value about £280; the Graham Scholarship in pathology of a sum not exceeding £400 per annum; Leslie Pearce Gould Research Scholarship in surgery for one year, value about £200; the Atkinson Morley Scholarship of £45 a year for three years, awarded after examination in the theory and practice of surgery; the Atchison Scholarship of £55 a year for two years for general proficiency in medical studies; the Magrath Clinical Scholarship, value about £150; the Filliter Exhibition in pathology of £30; the Percival Alleyn Prize for the advancement of surgery by research, value about £75; the Graham Gold Medal for research work; four Fellows Medals in clinical medicine; Liston Medals in clinical surgery; the Bruce Medal in pathology and surgery; two Tuke Medals in pathology; and the Erichsen Prize for practical surgery.

Fees.—The fee for the full course of final studies at the school is 112 guineas if paid in one sum, or 115 guineas if paid in two instalments. Fees for vaccination, fevers, and pharmacy not included.

Particulars of general and special courses can be obtained on application to the Dean of the Medical School, University College Hospital, University Street, W.C.1.

Westminster Hospital.

THE school, with its hospital situate in Broad Sanctuary, opposite Westminster Abbey, provides for the education of its students in the preliminary and intermediate subjects of the University of London at King's College. The rest of the work is done in the school buildings near the hospital. The number of in-patients averages 4,000 and out-patients upwards of 30,000 annually, and the hospital and school afford ample facilities for instruction in all branches of medicine and surgery.

Appointments.—A medical and surgical registrar are appointed annually, each with a salary of £150, and an obstetric registrar with a salary of £150. An assistant medical registrar and an assistant surgical registrar, salary £100 per annum each, are appointed for six months. A senior resident and casualty officer, salary £104 per annum and board, appointed for six months, may be extended for a further period of six months. A medical registrar to the children (Wander scholar), salary £225, is appointed for one year. Three house-physicians, three house-surgeons, three assistant house-physicians, three assistant house-surgeons, and a resident obstetric assistant are appointed after examination, and are provided with rooms, commons, and salary of £52 per annum, except the assistant house-physicians and the assistant house-surgeons, who are provided with commons only. The assistant house-physicians, after three months' service, become house-physicians for a further period of six months, and the assistant house-surgeons, after three months' service, become house-surgeons for a further period of six months. Two house-anaesthetists are appointed for three months, non-resident, salary £50 per annum. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among the qualified students. Every student must perform the duties of out-patient dresser for three months, and afterwards hold the office of in-patient dresser for three months. He is also required to serve two terms of three months each as medical clinical clerk to the in-patient physician and one term as gynaecological clinical clerk. Two pathological clerks are appointed every three months to assist in the post-mortem room. No student is eligible as an in-patient dresser or clinical clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and dressers in the special departments of hospital practice are periodically appointed. So far as vacancies permit, students of other hospitals are admitted to in-patients' dresserships or clerkships.

The governors of the hospital have now completed the extensive improvements and alterations to the hospital, which render it a still more efficient teaching institution, with an increased number of beds. An annexe devoted to radium therapy and research, containing twenty-two beds, has recently been opened.

The athletic ground is situated at Tooting, and can be reached in twenty minutes from the hospital.

Scholarships.—The following open scholarships are offered for competition during the year 1930-31: In the winter session two scholarships in anatomy and physiology, £75 each. In the spring two scholarships in anatomy and physiology, £75 each. A certain number of scholarships have been allotted to universities of England, Wales, and the Colonies, and to public schools. These scholarships are awarded entirely on the nomination of the Principal of the university or school.

Fees.—The annual composition fee is £40. An entrance fee of 10 guineas is payable by all students—namely, primary and intermediate students, £10 10s.; students entering for the final subjects, £8 8s. These fees include subscriptions for membership of the Clubs Union.

Further information and a prospectus can be obtained on application to the Dean at the Westminster Hospital, Westminster, S.W.1

London (Royal Free Hospital) School of Medicine for Women.

THE school is situated at 8, Hunter Street, Brunswick Square, W.C.1, close to the Royal Free Hospital. It is, like all the other London schools which have so far been mentioned, one of the constituent schools of the University of London. The laboratories are extensive and well lighted,

and are fully equipped for the examination courses of the University of London and the Royal Colleges of Physicians and Surgeons. Research laboratories are attached to all departments. A large, well-equipped library, common room, Union Room, and refectory are provided for the use of students. Resident accommodation for 80 students is provided in students' chambers attached to the school.

The Royal Free Hospital, Gray's Inn Road, W.C.1, has 268 beds, all of which are available for clinical instruction. The obstetrical and gynaecological unit controls 68 beds. A large maternity district is served from the unit with a separate maternity hostel in the Essex Road, Islington. There are separate departments for diseases of the eye, ear, and skin, children and infant welfare, venereal diseases, orthopaedic surgery, massage, light, electrical and *x*-ray work, dentistry, and casualty. Students attend the practice of one of the fever hospitals of the Metropolitan Asylums Board and receive special instruction in lunacy at Horton Mental Hospital, Epsom; they are also admitted to the practice of a number of special hospitals, and hold clerkships and dresserships at the Elizabeth Garrett Anderson Hospital, the Cancer Hospital, Hospital for Sick Children, Great Ormond Street, the National Hospital for Nervous Diseases, the South London Hospital, and the Royal Ophthalmic Hospital. The work of the school includes preparation for the Primary Fellowship examination, and also for the Medical School and general hospital course for dental students.

Appointments.—Qualified students of the school can obtain appointments as house-physicians and house-surgeons, obstetric assistants, surgical, gynaecological, and medical registrars, assistant pathologists, assistant anaesthetists, medical electrician, skiagrapher, and clinical assistants and demonstrators in various subjects.

Scholarships.—The Isabel Thorne Entrance Scholarship, value £30, the St. Dunstan's Medical Exhibition, value £60 a year for three years, which may be extended to five years, the Alfred Langton Scholarship of £50 a year for two years, the Flora Murray Bursary of £50, and the Mabel Sharman-Crawford Scholarship, value £20 a year for four years, are offered for competition in each year. The Sir Owen Roberts Memorial Scholarship of the value of £75 a year for four years, the Mrs. George M. Smith Scholarship of the value of £50 a year for three years, which may be extended to five years, the Dr. Margaret Todd Scholarship of the value of £37 10s. a year for four years, and the Sarah Holborn Scholarship of the value of £20 a year for three years, which may be extended to five years, are awarded in alternate years. The School Jubilee Bursary of £50 a year for three years is offered every third year. The Bostock Scholarship, value £90 a year for two or four years, is awarded by the Reid Trustees on the result of an examination held in May by the University of London every fourth year. The holder of the scholarship must enter the London School of Medicine for Women. The Lieutenant Edmund Lewis and Lieutenant Alan Lewis Memorial Scholarship, of the value of £25 a year for four years, is awarded every fourth year. The John Byron Bursary of £20 a year for two years, the Julia Ann Hornblower Cock Prize of £60, the Helen Prideaux Prize of £60, the Mabel Webb Research Scholarship of £30 for two years, the Fanny Butler Scholarship of £16 a year for four years, together with many other scholarships and prizes, are offered on sundry conditions. The Dr. Edith Pechey-Phipson Post-Graduate Scholarship of £100 is awarded annually. Altogether the school offers annually £1,350 in scholarships. Various missionary societies also offer scholarships on certain conditions, and assist women who wish to go to India and other countries as medical missionaries.

Fees.—Courses for the University of London degrees and the diplomas of the Conjoint Board in England, and other qualifications: £50 per annum throughout the course.

The Students' Union exists to promote corporate action of the students on matters of common interest, to promote and maintain athletic and other clubs, and to issue a school magazine. All students are required to become members of the Union.

Further information can be obtained from the Warden and Secretary.

KING'S COLLEGE.

IN the Faculty of Medical Science instruction is given in the preliminary and intermediate subjects of the first and second examinations leading to the degree of M.B., B.S. of the University of London, of the corresponding examinations of other universities, and of the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons. The courses are open to women students on the same terms as to men.

Regular students who have completed their preliminary and intermediate examinations proceed to one of the associated or other hospitals to pursue their studies for the final examinations. Special courses in anatomy and physiology are held in preparation for the primary examinations for the Fellowship of the Royal College of Surgeons.

A course for the degree of the University of London and for the diploma of the Royal College of Surgeons in dental surgery is given in conjunction with King's College Hospital Medical School.

Scholarships.—The entrance scholarships are: (1) Two Warneford Scholarships, each £30 for four years; subjects—selected from mathematics, classics, divinity, and science. (2) One Sambrook Scholarship of £30 for three years; subjects of examination selected from mathematics, classics, and science. The holders of the preceding awards must proceed to King's College Hospital. (3) Worsley, £100, paid in five annual instalments. (4) Rabbeth Scholarships, value £30 and £15, in July, for the best student of the first year. (5) Daniell Scholarship, £40, awarded on the results of the University Honours Examination. (6) The Layton and Berridge Studentships, each £150 per annum, and (7) numerous prizes.

Full information as to admission, fees, and scholarships can be obtained from the Dean of the Faculty of Medical Science, King's College, Strand, W.C.2.

UNIVERSITY COLLEGE.

THIS institution, one of the principal component parts of the University of London, possesses a Faculty of Medical Sciences whose work covers all the subjects included in the group commonly known as the preliminary medical sciences—namely, physics, chemistry, botany, and zoology; and also the intermediate medical sciences—namely, anatomy (including embryology and histology), physiology, biochemistry, and pharmacology. The new anatomy building, provided by the munificent gift of the Rockefeller Foundation of New York, was opened on May 31st, 1923, by His Majesty the King. This building forms part of the block which includes physiology and pharmacology. Research work is undertaken in all the above-named departments. The College undertakes the education of students in all the subjects mentioned, leaving them free to complete their education in the strictly professional subjects—medicine, surgery, and the like—at any one of the recognized schools of advanced medical studies. The work is somewhat differently arranged, according to whether the student has in view the degrees of the University of London or the diplomas of the Royal Colleges. In either case the whole work to be done is divided into courses devised to meet the requirements of different examinations, and students can join the College for any of them. Women students are admitted to all courses on the same terms as men. The general arrangements for the benefit of students include membership of the Union Society or the Women's Union Society with the College gymnasium and the athletic grounds. There is also a collegiate residence for about fifty-five men students at Ealing and for about seventy women students at Byng Place, Gordon Square.

Scholarships.—The scholarships and exhibitions obtainable include the Bucknill Scholarship, value 160 guineas, in chemistry, physics, botany, and zoology (the successful student must complete his work at University College Hospital Medical School), two entrance exhibitions in the same subjects, each of the value of 55 guineas, a Faculty of Medical Sciences Entrance Scholarship, value £30 a year, for three years; and the Bayliss-Starling Memorial Scholarship (physiology and/or biochemistry), £120.

Fees.—The fees for the courses covering the work of the First Examination for medical degrees of the University of London, and in both parts of the Second Examination, amount to 115 guineas. The fees for the courses covering the corresponding examinations held by the Conjoint Board in England also amount to 115 guineas. These fees may be divided into payments for the different courses which it may be desired to take out, but do not cover tuition for more than a stated period.

A handbook specially relating to this faculty may be obtained on application to the Secretary of University College, Gower Street, London, W.C.1.

THE PROVINCES.

THERE are in England and Wales, not counting London, ten medical schools, each supplying instructions in the full medical curriculum. Accounts of them here follow. In several cases information is appended about hospitals other than those directly connected with the school in question; such hospitals, officially and unofficially, play a part in the education which the students of the school receive, and in any case serve as places of additional or post-graduate study.

OXFORD AND CAMBRIDGE.

AT both Oxford and Cambridge there are medical schools which furnish unsurpassed opportunities for obtaining a good knowledge of the preliminary sciences and of anatomy, physiology, and pathology. The laboratories are excellently furnished, and the teaching staffs most distinguished. Both schools provide a full medical curriculum, and there is no essential reason why the student should not complete his career at either of them; but this is not commonly done, and is never, in the ordinary way, advised by the university medical authorities. The local hospitals—the Radcliffe Infirmary at Oxford and Addenbrooke's Hospital at Cambridge—though well equipped, are comparatively small. Students are therefore encouraged, as soon as they have completed the earlier examinations and taken a degree in arts, to join one of the London medical schools, and thus spend the time of their preparation for the final examinations in a city where the opportunities for gaining clinical knowledge are greater and more varied. A considerable proportion of Oxford and Cambridge medical students take the London Conjoint diplomas before graduating in medicine and surgery at their own university. The experience gained by holding resident hospital appointments is naturally of much advantage when sitting for the Final M.B. examination and when engaged in composing a thesis.

BIRMINGHAM.

THE school in this city is carried on by the Medical Faculty of the University of Birmingham, its students having an adequate number of good laboratories, classrooms, and other necessaries devoted to their use by the university. The clinical work is done at the General and Queen's Hospitals, which are amalgamated for the purpose. Together they have upwards of 700 beds for medical, surgical, and special cases, with an array of special departments of all kinds, including one for lying-in women. Clinical instruction is given in the wards and out-patient and special departments daily, and formal clinical lectures are delivered weekly throughout the session. Special tutorial classes are also held alike for the degrees of Birmingham and some other universities and for the diplomas of corporations.

Appointments.—The large number of appointments open to past or other students includes the following:—At the General Hospital: two surgical registrars, £100 (commencing) a year; one resident medical officer, salary £155 a year; one resident surgical officer, salary £180 a year; one assistant resident surgical officer, salary £100 a year; one resident pathologist, salary £70 a year; two visiting anaesthetists, salary £50 a year; two resident anaesthetists, salary £120 a year; four house-surgeons, office tenable for nine months, £70 a year; one house-surgeon to the gynaecological and one to the special departments, each tenable for six months, £70 a year; four house-physicians, post tenable for six months, £70 a year. At the Queen's Hospital: one resident medical registrar, salary £200 a year; two resident surgical officers, £100 a year, tenable for three years; three house-physicians, three house-surgeons, one obstetric and one ophthalmic house-surgeon, one ear, nose, and throat house-surgeon, and one house-physician for duty at the Nerve Hospital (associated with Queen's Hospital), tenable for six months, salary £70 a year, with board, lodging, and washing; one casualty house-surgeon, tenable for three months, salary £70 a year, with board, lodging, and washing. At the City Public Assistance Institutions: five resident medical officers. At the Birmingham General and Branch Dispensaries: twelve resident surgeons. At the Birmingham Mental Hospitals: five assistant medical officers. At the City Fever Hospitals: three assistant medical officers. At the Children's Hospital: one resident surgical officer, one resident medical officer. At the Birmingham and Midland Eye Hospital: four resident surgeons. At the Orthopaedic and Spinal Hospital: two clinical assistants (non-resident). At the Ear and Throat Hospital: one house-surgeon, £70 a year; four clinical assistants (non-residents). Four non-resident appointments are in the gift of the Public Assistance Committee.

Scholarships.—There are numerous money and other awards for students of sufficient merit, among them being the following: The Walter Myers Travelling Studentship of £300, offered each alternate year for research work and tenable abroad; the Sands-Cox Scholarship of £42 (an entrance scholarship in the Faculty of Medicine, awarded on higher school certificate examination of the Joint Matriculation Board (July)); four Queen's Scholarships of £10 10s. each, awarded annually at the second (Part II), third, fourth, and final university examinations respectively; one or more Sydenham Scholarships, allotted on entrance to students who are the sons of deceased medical men; the Ingleby Scholarships (two) of £10 for proficiency in midwifery and diseases of women; the Arthur Foxwell Memorial Gold Medal (clinical medicine); the Sampson Gamgee Memorial Medal for surgery (Final M.B.); the Russell Memorial Prize (for examination in nervous diseases, final year); the Priestley Smith Prize in ophthalmology (awarded in the final examination); and the Peter Thompson Prize in anatomy (value about £6) for students in their third university year. There is also a scholarship of £46 17s. 6d. for students proceeding to a degree in dental surgery. University Clinical Board Prizes are awarded annually as follows: Senior Medical Prize, gold medal; Senior Surgical Prize, gold medal; Midwifery Prize, gold medal; Junior Medical Prize, silver medal; Junior Surgical Prize, silver medal.

Fees.—The composition fee for university classes is £106 5s. This covers all the work required for the degrees of Birmingham and some other universities, and for the ordinary qualifications of licensing corporations, but not the additional courses required for the Fellowship of the Royal College of Surgeons of England, the diploma and degrees of the university in State medicine, and some other special work. The total cost for the six years' curriculum, including hospital and examination fees, is estimated at £242 17s. 6d.

Other information should be sought from the Dean of the Medical Faculty, University, Edmund Street, Birmingham.

BRISTOL.

THE school is carried on by the Faculty of Medicine of the university, and provides full instruction for all its degrees and for the diploma in dental surgery.

Clinical Instruction.—The allied hospitals (Bristol Royal Infirmary and Bristol General Hospital) have between them 663 beds and extensive out-patient departments, special clinics for diseases of women and children, and those of the eye, throat, and ear, in addition to large and well-equipped departments for dental work and large out-door maternity departments. At each of these institutions there are well-arranged pathological museums, post-mortem rooms, and laboratories for morbid anatomy. There are also laboratories for work in clinical pathology, bacteriology, and cytology, in which special instruction is given in these subjects. Departments are provided and well equipped for *x*-ray work, both for diagnosis and treatment, for electro-cardiography, and for the various forms of electrical treatment, including high-frequency currents, electric baths, Finsen light treatment, and massage. The students of the school also attend the City and County Mental Hospital, the Ham Green Fever Hospital, the practice of the Royal Hospital for Sick Children and Women, containing 100 beds, and that of the Bristol Eye Hospital, with 40 beds. In addition, by the kind permission of the Health Committee of the Bristol City Council, students may attend the clinical practice at Southmead Hospital, which has 556 beds. The new Orthopaedic Hospital at Winford is also available.

Appointments.—(1) Undergraduate: Medical clerkships, surgical dresserships, also ophthalmic, obstetric, pathological, dermatological, ear, nose, and throat clerkships, are tenable at the Bristol Royal Infirmary and the Bristol General Hospital. In these institutions the dressers reside in rotation free of charge. (2) Post-graduate: At the Bristol Royal Infirmary: four house-surgeons, one casualty house-surgeon, two house-physicians, one house-physician for cancer research wards, one resident obstetric officer, one ophthalmic and gynaecological house-surgeon, one ear, nose, and throat house-surgeon, one assistant to the senior resident medical officer, who also acts as house-surgeon and house-surgeon to the skin department, and one dental house-surgeon. All these appointments are for six months. Salary in each case at the rate of £60 per annum, with board, apartments, and laundry, except the casualty house-surgeon and the dental house-surgeon, who receive £80 per annum. From the resident medical officers a senior resident medical officer is appointed at a salary of £200 per annum. At the Bristol General Hospital: senior resident medical officer, £250 per annum; casualty house-surgeon, £60 per annum; two house-physicians, £60 per annum; two house-surgeons, £60 per annum; resident obstetric officer, £60 per annum; house-surgeon to special depart-

ments, £60 per annum; dental house-surgeon (non-resident), £300 per annum. All these appointments are for six months, except that of senior resident medical officer, which is for two years.

Scholarships.—The following are among the scholarships and other awards open to students of the school: The Ashworth Hallett Scholarship, value £40, open to women only; two Martyn Memorial Pathological Scholarships of £10 each; the Tibbits Memorial Prize, value 7 guineas, for proficiency in practical surgery; the Committee's Gold and Silver Medals, for fifth-year students for general proficiency; the Augustin Prichard Prize, value about 6 guineas, for proficiency in anatomy; the Henry Clark Prize, value 11 guineas, for proficiency in gynaecology; the Crosby Leonard Prize, value 6 guineas, for proficiency in surgery; the Suple Surgical Prize, a gold medal and 7 guineas; the Suple Medical Prize, a gold medal and 7 guineas; the Henry Marshall Prize, value £12, for dressers; the H. M. Clarke Scholarship, value £15, for proficiency in surgery; the Sanders Scholarship, value £22 10s., for general proficiency; the Barrett-Roué Scholarship for proficiency in diseases of the nose, throat, and ear, or skin, value £17; Lady Haberfield Scholarship, value about 25 guineas; Bristol and Bath City Scholarships and the Scholarships offered by the counties of Gloucestershire, Somerset, Wilts, Dorset, etc., are tenable in the university.

Some of the Fellowships awarded by the Colston Research Society for research in the university are allotted to the Faculty of Medicine.

A Beaverbrook Fellowship tenable for three years is open to all members of the university holding a medical qualification.

Fees.—The fee for all the courses required for the medical curriculum, including hospital practice, is 205 guineas, paid by annual instalments.

Further information as to scholarships, curricula, and fees can be obtained from the Dean of the Faculty of Medicine, or the Registrar of the University, Bristol.

University of Durham College of Medicine.

THIS, the Medical School of the Faculty of Medicine of the University of Durham, is in the neighbouring city, Newcastle-upon-Tyne. Its classes and lectures are arranged to meet the requirements of the university in all the degrees which the latter grants, and also those of the other examining bodies. The students do their work in the preliminary sciences at Armstrong College, also part of the university. Hospital practice is carried out at the Royal Victoria Infirmary, a general hospital containing more than 550 beds, where there are facilities for the study of the various special subjects. Students do their practical midwifery at the Princess Mary Maternity Hospital, which contains 90 beds, and has an annual indoor and outdoor attendance on 3,000 cases. In the Heath wing of the school itself there is a gymnasium and a set of rooms for the separate use of the students. A new bacteriological department has been erected adjacent to Armstrong College.

Post-Graduate Instruction.—A comprehensive series of post-graduate courses has been arranged to enable practitioners to take advantage of the facilities for laboratory work and clinical study which are afforded by the College, the Royal Victoria Infirmary, and other associated hospitals, and in order to meet the varied requirements of practitioners there are general and special courses in the winter and summer session as well as an intensive course in the summer vacation.

Students' Union.—A Students' Union has been erected and furnished at a cost of over £40,000, and is in daily use. Separate accommodation (non-residential) is provided for men and women students.

Appointments.—Pathological assistants, and assistants in the eye department, throat and ear department, and department for skin diseases, are elected periodically. Clinical clerks and dressers are appointed every three months.

Scholarships.—University of Durham Entrance Scholarship, £25 a year for four years; Pears Entrance Scholarship, £40 a year for three years (awarded every third year); Heath Entrance Scholarship (from Kepier Grammar School), £60 (renewable); Province of Durham Masonic (Entrance) Scholarship, £60 (renewable); Heath Scholarship for surgery, £200, available every second year; Rutherford Morison Surgical Scholarship, £180, available every third year.

The following scholarships are tenable for one year—namely, Tulloch Scholarship for elementary biology and organic chemistry, £20; Dickinson Scholarship for medicine, surgery, midwifery, and pathology, Gold Medal and £20; Charlton Scholarship for medicine, £25; Gibb Scholarship for pathology, £28; Luke Armstrong Scholarship for comparative pathology, £25; Stephen Scott Scholarship for surgery, £40; Philipson Scholarships for highest marks in Final M.B., B.S. Examination, two of £48 each; Goyder Memorial Scholarship for clinical medicine and clinical surgery, interest on £325; Gibson Prize for midwifery and diseases of women and children, £10; Turnbull Prize and Silver Medal for surface anatomy; Outterson Wood Prize for psychological medicine, £10; and Sewell Memorial Prize and Silver Medal for clinical pathology. At the end of each session a prize of books is awarded in each of the regular classes.

Fees.—The composition fee for lectures at the college is £140. Composition fee for hospital practice, £46, *plus* £2 2s. yearly for three years, payable to the Committee of the Royal Victoria Infirmary. Other information should be sought from the Dean of the College, University of Durham College of Medicine, Newcastle-upon-Tyne.

Leeds.

THE School of Medicine—which is open to both male and female students—in this city forms the teaching centre of the Medical Faculty of the University of Leeds, and is situated in immediate proximity to the General Infirmary, where students sufficiently advanced receive their clinical instruction. The buildings were opened in 1894, and contain excellent dissecting rooms, well-arranged laboratories for physiology, pathology, and bacteriology, three lecture theatres, and several similar classrooms. In addition, there are a library and reading room and museums of pathology and anatomy. The comfort of the students is secured by means of common rooms and a refectory. Extensions of the medical school buildings will be opened in October, 1930, and an Institute of Pathology is to be built in the near future on an immediately adjacent site. The General Infirmary has 632 beds, and includes gynaecological and ophthalmic wards, special children's wards, and a large out-patient department. The Ida and Robert Arthington Semi-convalescent Hospitals, Cookridge, attached to the infirmary, have 88 beds. The West Riding Mental Hospital at Wakefield is available for the study of mental diseases. Students can, in addition, attend the practice of the Leeds Public Dispensary, the Hospital for Women and Children, and the Leeds Maternity Hospital.

Appointments.—Physicians' clerks and surgical dressers are appointed every six months; clerks in the children's department, orthopaedic dressers, ophthalmic and aural dressers, gynaecological ward clerks, maternity clerks, assistant physicians' clerk, dermatological clerks, assistant surgeons' dressers, dressers in the casualty rooms, junior and senior post-mortem clerks, laboratory assistants and dressers in the venereal clinic every three months. After graduation a considerable number of resident and other appointments become available in the Leeds General Infirmary, Leeds Public Dispensary, Hospital for Women and Children, West Riding Mental Hospital, etc., occupying periods of from six to twelve months at rates varying from £20 to £150 per annum.

Scholarships.—The university awards annually on the results of the first examination a scholarship in the form of free admission to the lectures and classes given in the School of Medicine. The university also awards a scholarship on the results of the second examination, of the value of £68, in the form of free admission to the clinical teaching of the infirmary.

Fees.—It is estimated by the authorities that the approximate cost of medical education to a student in this university is £324, *plus*, of course, the expenses of living during the five and a half years covered by the curriculum. The composition fee for the course for the first, second, and third examinations, and for the clinical work at the infirmary, is £237. The composition and clinical fee for those who have passed the second examination is £156.

Further information can be obtained from the Academic Subdean or Clinical Subdean, School of Medicine, Leeds.

Liverpool.

THE Medical School of this city is part of the university, and, owing to the enlightened liberality of several men of wealth, is exceptionally well provided with special laboratories, as well as with ordinary spacious and well-equipped classrooms and laboratories for the instruction of students proceeding to medical degrees and diplomas in special and ordinary subjects. All the laboratory and other rooms are situated close to one another and intercommunicate, together forming large blocks of buildings. The work of students throughout all stages of their career is arranged upon very satisfactory lines, and the teaching hospitals, of which a list is given below, have amalgamated to form the clinical school of the university.

Appointments.—The nature of the appointments open to past and other students at this school will be gathered from the account which follows of the hospitals forming its clinical department.

Scholarships.—The awards made each year to successful students total over £1,500. They include the following: Two Holt Fellowships, one in pathology, the other in physiology; a Robert Gee Fellowship in anatomy; two John Rankin Fellowships in anatomy; a John W. Garrett International Fellowship in bacteriology; a Johnston Colonial Fellowship in biochemistry; an Ethel Boyce Fellowship in gynaecology; and a Thelwall Thomas Fellowship in surgical pathology; one Lady Jones Fellowship in orthopaedic surgery (value of Fellowships: two at £200, two at £150, two at £120, four at £100); a University Scholarship of £50, awarded on the results of the Final M.B. (Part A) Examinations; a Ridgway Research Scholarship (£100); a Scholarship in mechanical dentistry of £20; two Lyon Jones Scholarships, of the annual value of £21 each for two years, one for the junior and the other for the senior students; the Derby Exhibition of £15; the Clinical School Exhibition of £15; the Owen T. Williams Prize; the Torr Gold Medal in anatomy; John Rankin Exhibition in practical anatomy, £25; the George Holt Medal in physiology; the Kanthack Medal in pathology; Mitchell Banks Medal in anatomy; the Robert Gee Prize of £5 5s. in children's diseases; Mary Birrell Davies Memorial Scholarship (women), £60 per annum for four years; Robert Gee Entrance Scholarship (men), value of £42 10s. per annum for four years; Dental Operating Prizes (four); Orthodontia Prizes (two); Samuels Memorial Scholarships, three at £20 each; one Thomas H. Bickerton Prize in anatomy; Dr. N. E. Robert Prize in zymotic diseases; Ash's Prize in dental surgery, value £2 2s.; Gilmour Medal; and other entrance scholarships. In addition, a number of gold and silver medals have recently been instituted in the following subjects: pharmacology, surgery, forensic medicine and toxicology, public health, medicine, obstetrics and gynaecology, orthopaedic surgery, and laryngology and otology.

Fees.—Information as to the fees for the courses of instruction provided by the schools should be sought from the Dean of the Medical Faculty.

The Clinical School.

As many as nine hospitals have combined to form the clinical school of the university, these being: The Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, the Stanley Hospital, the Royal Liverpool Children's Hospital, the Hospital for Women (with the Samaritan Hospital), the Liverpool Maternity Hospital, the Eye and Ear Infirmary, and St. Paul's Eye Hospital. Between them they provide over 1,500 beds.

MANCHESTER.

THE staff of the Medical School in this city constitutes the Medical Faculty of the Victoria University, all the arrangements for the instruction of students, both in their earlier and their later studies, being of an elaborate nature. The clinical work of the undergraduates is done chiefly in connexion with the Royal Infirmary, an institution which itself contains 614 beds, and has associated with it a large convalescent home (132 beds) and a Central Branch Hospital (54 beds). The courses in mental diseases are partly taken in the County Mental Hospitals at Prestwich and Macclesfield. Instruction in practical gynaecology and midwifery is given at the Royal Infirmary and the St. Mary's Hospitals.

Appointments.—The following are among the appointments open to past and present students of this school in connexion with its arrangements for clinical tuition: Two surgical registrars, at £150 per annum; two pathological registrars, at £100 and £50 per annum; one medical registrar, at £150 per annum; a cardiographic registrar, at £150 per annum; a surgical tutor, at £30 per annum; a director of the clinical laboratory, at £400 per annum, and two assistants, at £350 and £300; three assistant medical officers and three assistant surgical officers, each at £35 per annum; assistant surgical officers, aural department, at £35 per annum; seven anaesthetists, from £75 to £125 per annum each; one resident medical officer, one year, £200 per annum; one resident surgical officer, one year, £200 per annum; three resident medical officers for Central Branch, one at £200 and two at £100 per annum; one assistant resident surgical officer, £150 per annum; one resident medical officer at the Convalescent Hospital at Cheadle, £250 per annum; two assistant medical officers to radiological department, £150 and £105 per annum; medical officer, physio-therapeutic department, £150 per annum; assistant surgical officer, gynaecological department, £35 per annum; assistant to the dermatologist, £20 per annum; and three assistant surgical officers for Central Branch, £75 per annum; ten senior and ten junior house-surgeons and ten house-physicians, appointed during the year for periods of six months, at a salary of £50 for the first six months, and £100 for the second six months. Resident officers are appointed to the gynaecological, the eye, and the ear and throat departments every three months. Clinical clerks and surgical dressers are appointed to the various departments of the hospital every three months. Non-resident clinical assistantships for qualified medical men and women, tenable for six months, at an honorarium of £35.

Entrance and other Scholarships.—The following are among the scholarships obtainable by students of the school: Rogers and Seaton Scholarships in Arts (in alternate years), £40 per annum, tenable for two years. Three Hulme Scholarships, tenable for three years, of £35, one being awarded annually for proficiency in subjects of general education. Two James Gaskill Scholarships of £35, tenable for two years, one being awarded annually for proficiency in the branches of mechanics and chemistry. A Dora Muir Scholarship, £30 per annum, tenable for three years, and open to the competition of women students only. This is awarded triennially. Sir J. P. Kay-Shuttleworth Scholarship, £30 per annum, tenable for three years, awarded triennially, open to the competition of scholars from Sedbergh School, Giggleswick School, and Burnley Grammar School; subjects—mathematics, chemistry, and mechanics. Dreschfeld Memorial Scholarship, value £20, tenable for two years and awarded triennially on the result of the Entrance Examination. John Russell Medical Entrance Scholarship, awarded annually, value £45. Two Dauntesey Junior Medical Scholarships, value £50 each, tenable for one year, for candidates who have not commenced the second year of study leading to a medical qualification; subjects—zoology, botany, and chemistry. One Dauntesey Senior Medical Scholarship, £50 for one year, awarded on results of Second M.B. Examination. Two Entrance Scholarships in medicine, value 160 guineas, awarded annually for proficiency in arts or science respectively. Tom Jones Exhibition in anatomy, £25, offered annually. A Robert Platt Physiological Scholarship of £90, tenable for one year. A Leech Fellowship of £100 for original research after graduation. A Graduate Research Scholarship in medicine, value £70, tenable for one year, awarded annually for proficiency shown at Final M.B. Examination. A Dumville Surgical Prize, value £15, awarded annually at graduation. The Tom Jones Memorial Surgical Fellowship, value £105, tenable for one year, usually awarded annually. The Turner Medical Prizes, value 10 guineas each, awarded annually for proficiency in certain subjects of the Final M.B., Ch.B. Examination. The John Henry Agnew Prize of £30, awarded annually for proficiency in the diseases of children. The Ashby Memorial Scholarship, tenable for one year (£100), for research in the diseases of children; offered triennially. Sidney Renshaw Prize in physiology; one offered annually (£15). Wild Prize in pharmacology (£10). The John Henry Agnew Fellowship in diseases of children, £120, offered triennially. Eliza Marple Holt Post-Graduate Medical Scholarship for Women, £60 for one year, offered biennially. The details and regulations of the Dickinson Scholarships—(1) for anatomy, (2) for pathology, (3) Research Scholarship in surgery, and (4) Travelling Scholarship in medicine—may be obtained from the Secretary to the Trustees. The Morrison Watson Fellowship for research in anatomy is offered annually, value £150; also the Sheridan Delepine Fellowship in preventive medicine, value £300, is offered biennially. The Sam Gamble Scholarships—the trustees are prepared to award four scholarships of not less than £40 per annum, tenable for not more than four years, to women students who have passed the First M.B. Examination; the conditions can be obtained from the Registrar. The Knight Prize of £50 for original research in the psychological factors in the causation of mental disorder—open to holders of the Diploma in Psychological Medicine or medical practitioners who have been registered in the university as candidates for that diploma.

Fees.—The composition fee for the university course in medicine is 114 guineas for men, 112 guineas for women, payable in four instalments of 28½ and 28 guineas respectively, but this sum does not include the fee to cover the work required for the First M.B. Examination. This is £42, payable in one sum. Hospital fees are additional, and usually amount to about 77 guineas.

A prospectus and further information about the school and scholarships may be obtained from the Registrar.

Clinical Work.—The Royal Eye Hospital, the Hospital for Diseases of the Skin, the Manchester Northern Hospital for Women and Children, the well-known Hospitals for Children at Pendlebury, and St. Mary's Hospitals for Women and Children, the Manchester Hospital for Diseases of the Ear, Monsall Fever Hospital, the Christie Cancer Hospital, the Hospital for Consumption and Diseases of the Throat and Chest, the Ancoats Hospital, and the Salford Royal Hospital, all make arrangements for the instruction of students.

SHEFFIELD.

IN this city the Medical School is one of the departments of the university, being conducted and controlled by its Medical Faculty, and occupying practically the entire north wing of the quadrangle of the university buildings overlooking Weston Park. The laboratories and lecture rooms

connected with the subjects of the first and second examinations—namely, chemistry, physics, biology, anatomy, and physiology—are, both as regards structural arrangement and scientific equipment, on the most modern and complete lines.

For students of pathology and bacteriology there are laboratories replete with everything necessary for the most advanced work, and a large pathological museum, which is open daily. In addition, there is a large library and reading room. There are a number of recreation, athletic, and other societies, all under the management of an annually elected students' representative council, and large and comfortable common rooms for both men and women students. There are also two student unions—one for men and one for women students. In the university buildings there is a refectory open to all students of the school, and a university journal is published each term. The ordinary clinical work of the school is done at the Royal Infirmary and Royal Hospital, which have amalgamated for the purpose of clinical instruction, and provide over 800 beds for medical, surgical, and special cases, including diseases of the eye.

In addition, the Royal Infirmary has special departments for the treatment of diseases of the skin and ear, with beds assigned to them; whilst at the Royal Hospital there are special out-patient departments for diseases of the throat, ear, skin, orthopaedics, and mental diseases. The medical and surgical staffs attend daily, and give clinical instruction in the wards and out-patient rooms. Clinical lectures in medicine and surgery are given weekly. Instruction in the practical administration of anaesthetics is given at either institution by the anaesthetists, and the post-mortem examinations at both institutions are in charge of the Professor of Pathology, and afford ample material for study of this subject. Students are able to attend the practice of the Jessop Hospital for Diseases of Women and the Hospital for Sick Children, while special courses on fever are given at the City Fever Hospital, and on mental diseases at the South Yorkshire Mental Hospital.

Appointments.—The following appointments are open to all students who have passed their examinations in anatomy and physiology: (1) casualty dresserships, (2) surgical dresserships, (3) medical clerkships, (4) pathological clerkships, (5) ophthalmic clerkships, (6) clerk to the skin department, etc. These appointments are made for three months, commencing on the first day of October, January, April, and July.

Scholarships.—Entrance Medical Scholarship, value about £190, open to both sexes. Six Edgar Allen Scholarships of £125 a year for three years may be held by students taking the degree course in medicine. Two Town Trustees' Scholarships, each of the value of £50 a year, tenable for three years, for boys or girls under the age of 19 years who have been educated in a Sheffield secondary school for a period not less than two years immediately preceding the examination. Four Town Trustees' Scholarships, value £50 a year, for boys or girls under 19 years of age educated in any school in Sheffield, secondary or otherwise. Town Trustees' Fellowship, value £75, tenable for one year. Mechanics' Institute Fellowship, value £50 (with remission of fees), tenable for one year, and renewable for a second year. The Frederick Clifford Scholarship, value about £50, tenable for two years. Kaye Scholarship, for proficiency in anatomy and physiology. Gold and bronze medals are also awarded for proficiency in various subjects.

Fees.—Students in the Faculty taking their complete medical course in the university pay an inclusive composition fee of £38 for each of the first five years and £25 6s. 8d. for the sixth year. The composition fees for the dental courses are as follows: for B.D.S., first and third years, £75; second, fourth, and fifth years, £25; for L.D.S., first and second years, £75; third and fourth years, £25. The fees for special courses taken separately can be ascertained by inquiry of the Dean. (*Note*: The fees for the session 1931–32 will be increased.)

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

THE WELSH NATIONAL SCHOOL OF MEDICINE.

THE next session opens on October 7th. All classes are open to both men and women students. Particulars relating to the admission of students as from October 7th, 1930, can be obtained on application to the Dean of the Faculty of Medicine, or to the Secretary, Welsh National School of Medicine, Newport Road, Cardiff.

The following is a list of heads of departments: Physics, Professor (to be appointed); chemistry, Professor W. J. Jones; zoology, Professor W. M. Tattersall; botany, Professor R. C. McLean; anatomy, Professor C. McLaren West; physiology, Professor T. Graham Brown; materia medica and pharmacology, Dr. W. Mitchell Stevens; pathology and bacteriology, Dr. J. B. Duguid; medicine, Professor A. M. Kennedy; surgery, Professor A. W. Sheen; obstetrics and gynaecology, Professor Sir Ewen J. Maclean; preventive medicine, Professor Edgar L. Collis; tuberculosis, Professor S. Lyle Cummins.

SCOTLAND.

As will be gathered from the following paragraphs, the facilities for acquiring a medical education in Scotland are very ample, whether the student be proceeding to a university degree or to a diploma. To the descriptions of the different Scottish medical centres is in some cases added an account of hospitals which either play an official part in the education given to students as yet unqualified, or offer valuable opportunities for post-graduation work.

ABERDEEN.

THE school is conducted by the Faculty of Medicine. This comprises thirteen chairs, from which instruction is given in all the main branches of medical science—namely, botany, zoology, physics (ordinary and preparatory), chemistry (ordinary and preparatory), anatomy, physiology, materia medica, pathology, bacteriology, forensic medicine, surgery, medicine, and midwifery. Courses of instruction in public health and infectious diseases, tropical medicine, medical ethics, tuberculosis, and clinical methods are conducted by lecturers appointed by the University Court. Special opportunities for practical instruction are afforded in the laboratories and museums attached to the departments.

Clinical instruction is obtained in the Royal Infirmary (accommodating 370 patients), the Royal Mental Hospital (900 patients), the Sick Children's Hospital (132 patients), the City Fever Hospital (350 patients), the General Dispensary, Maternity, and Vaccine Institution (10,000 out-patients annually), and the Ophthalmic Institution (3,000 patients annually). Courses of practical instruction are given in diseases of children at the Sick Children's Hospital; in fevers at the City Fever Hospital; in mental diseases at the Royal Mental Hospital; in diseases of the ear, nose, and throat at the Infirmary and Dispensary; in diseases of the eye at the Infirmary and Eye Institution; in venereal diseases and diseases of the skin at the Royal Infirmary.

The degrees granted in medicine are: Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.). A diploma in public health is conferred after examination on graduates in medicine of any university of the United Kingdom.

The degree of Ph.D. is also granted in this faculty.

Bursaries, scholarships, and fellowships, to the number of fifty, and of the annual value of £1,200, may be held by students of medicine in this university. They range from £8 to £150 per annum, and are tenable in most cases for two or three years. The winter session begins on October 14th, 1930; the summer session on April 21st, 1931.

Fees.—An inclusive fee of 126 guineas is payable for instruction within the university, and the fee for the degrees of M.B., Ch.B. is 33 guineas. The total cost, including hospital fees, class and matriculation fees, and degree fees, is about £242.

EDINBURGH.

THERE are two Schools of Medicine: the School of the University, and the School of Medicine of the Royal Colleges of Physicians and Surgeons of Edinburgh.

THE UNIVERSITY SCHOOL.—This school, in addition to other resources of the university, has the following means of affording practical instruction: Royal Botanic Garden, Herbarium, and Museum; zoological laboratory and museum of science and art; physical laboratory; chemical laboratories; dissecting room, bone room, and anatomical museum; physiological laboratory; medical jurisprudence laboratories; John Usher Institute of Public Health; materia medica museum and laboratory; post-mortem department of the

Royal Infirmary and University Pathological and Bacteriological Laboratory; tutorial classes of practice of physic, of clinical medicine, and clinical surgery, surgery and midwifery; and the practice of certain other hospitals.

Fees.—The sessional fee for chemistry, anatomy lectures, physiology, pathology, materia medica, surgery, medicine, and midwifery is £6 6s. each. Physics, botany, zoology, forensic medicine, and public health, £5 5s. Practical zoology, practical anatomy (summer), morbid anatomy, practical materia medica, mental diseases, practical pathology, clinical midwifery, and medical entomology and parasitology, £4 4s. Experimental physiology, diseases of tropical climates, practical botany, histology, operative surgery, clinical surgery (per term), clinical medicine (per term), and experimental pharmacology, £3 3s. Practical anatomy (winter), £6 16s. 6d. Practical chemistry, £4 14s. 6d. Regional anatomy, chemical physiology, surgical pathology, and infectious diseases, £1 11s. 6d. Tuberculosis, diseases of children, diseases of the eye, diseases of the larynx, ear, and nose, diseases of the skin, and venereal diseases, £2 12s. 6d. Advanced bacteriology, £7 17s. 6d. Clinical gynaecology and applied anatomy, £2 2s.

Scholarships.—There are many funds for the assistance of students by means of bursaries, scholarships, exhibitions, and money awards from the beginning to the end of their undergraduate career. In addition, there are funds which help those who have taken a first degree in medicine and surgery to continue at work as research students. The value of these awards, and the conditions attaching to them, are so varied that those interested should consult the prospectus of the school itself. No other university is in a better, even if as good, position to smooth the financial path of earnest students.

THE SCHOOL OF MEDICINE OF THE ROYAL COLLEGES.—This school is composed of lecturers licensed by the Royal College of Physicians and the Royal College of Surgeons, and also recognized by the university through their *licentia docendi*; for the sake of convenience they lecture in separate buildings near to the Royal Infirmary, but form a single corporate body governed by a board elected by the Royal Colleges of Physicians and Surgeons and by the Lecturers. This board, with the assistance of the standing committees of the school, supervises the whole management and especially the maintenance of the efficiency and discipline of the school. The different buildings at present utilized for the purposes of lecturing are the following: (1) Surgeons' Hall, Nicolson Street; (2) New School, Bristo Street; (3) Nicolson Square; (4) Marshall Street; and other places. The teaching is similar to that of the Scottish universities, and the students receive similar certificates at the close of each session. The courses on the special subjects are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the school. The fees payable for class and other instruction, and including the sums payable on admission to the examination of the Conjoint Board for the triple qualification, amount to about £180. The Calendar, giving full information regarding classes and fees, can be obtained (price 6d.) on application to the Dean of the School, Surgeons' Hall, Edinburgh.

WOMEN STUDENTS IN EDINBURGH.—Until the close of the summer session of 1916 women students intending to proceed to graduation in the University of Edinburgh, as well as those entering for the triple qualification of the Royal Colleges of Edinburgh and Glasgow, received their training in the Edinburgh School of Medicine for Women. Now women students study under the same conditions as men, and may obtain either the university degree or the diploma of the Royal Colleges. In the university systematic lectures are given to them by the professors in the ordinary classes, which are therefore mixed. In clinical surgery, however, while the lectures are attended by mixed classes, the women students are restricted to the wards of one charge. The particular wards are changed every six months, each of the surgeons to the infirmary taking the women students in rotation. With few exceptions, prizes, scholarships, bursaries, and similar distinctions are open to women under the same conditions as for men. The women students also have the same privileges as in the past have been given to the men of attending a certain proportion of the extra-mural classes taught by the lecturers of the School of Medicine of the Royal Colleges. Most of the students' societies are open to women, with the exception of the University Union and the Royal Medical Society. Their place is taken by the Women Students' Union and the Women's Medical Society. There is also a Women's Athletic Club, with playing fields gifted to it by the university. The membership of the Royal College of Physicians and Fellowships of the two Royal Colleges are also open to women. Information on matters connected with women's studies may be obtained from the Adviser of Women Students, The University, Edinburgh.

GLASGOW.

THE UNIVERSITY SCHOOL FOR MEN.—The whole course of study required for graduation (M.B., Ch.B.) at the University of Glasgow can be taken here. Besides ample provision for lectures there is practical and clinical work at the hospitals, and practical courses are conducted in the laboratories of the following departments: pathology, public health, pharmacology, physiology, surgery, anatomy, chemistry, zoology, physics, and botany; the Botanic Garden and the Hunterian Museum (Pathology) are also open to students. Well-equipped new buildings have been provided for botany, zoology, practical anatomy, and operative surgery, as well as for pathology; the very large additions made a number of years ago to the chemical laboratory render it one of the most extensive in Scotland. The classrooms and laboratories for the departments of physics, physiology, pharmacology, materia medica, medical jurisprudence, and public health are also of recent erection, and are elaborately equipped. Four additional chairs of medicine, surgery, obstetrics, and pathology have been recently established, the professors being specially attached to the Royal Infirmary; and a number of university lectureships in clinical medicine, clinical surgery, venereal diseases, laryngology, dermatology, otology, psychological medicine, tuberculosis, pathological biochemistry, and electrical diagnosis and treatment have been founded there. Other chairs have been founded at the university in bacteriology, organic chemistry, physiological chemistry, applied physics, public health, and paediatrics. There are also lectureships on the surgical and medical diseases of children and on electrical diagnosis and therapeutics. The university, in short, has made great and successful efforts to extend and improve the accommodation of the medical departments, to strengthen the teaching staff, and to encourage post-graduation and research work. A diploma in public health is now also granted. Three very extensive general hospitals in the city afford exceptional opportunities for clinical instruction—namely, the Western Infirmary (600 beds), near the university, to which the Regius Professors are attached; the Royal Infirmary (782 beds); and the Victoria Infirmary (380 beds); while the Royal Mental Hospital, Gartnavel (500 beds), the Royal Hospital for Sick Children (290 beds), the Royal Maternity and Women's Hospital (114 beds), the Glasgow Eye Infirmary (100 beds), the Ophthalmic Institution (35 beds), the fever hospitals at Belvidere (680 beds) and Ruchill (540 beds), and other institutions afford facilities for the practical study of special branches. The large general hospitals of the parish council are now also available for clinical instruction in medicine and surgery. Information regarding post-graduate study will be found at page 387.

Bursaries.—Bursaries confined to the Medical Faculty amount in annual value to about £1,000, while bursaries in any faculty, amounting to about the same annual sum, may be held by students of medicine, a number of both sets being open to women. Several valuable scholarships may be held by medical students who have graduated in arts.

The following bursaries are open for competition to students entering on their first session of attendance in the Faculty of Medicine: Davidson Bursary, annual value £40, tenable for four years, for students who propose before entering the Faculty of Medicine to take the degree of B.Sc. in pure science, including in their curricula anatomy and physiology. Highland Society (Glasgow) Bursaries, annual value £25 each, tenable for five years, for students of Highland descent, open to women; two bursaries vacant each year. Logan Bursary, annual value £25, tenable for four years, open to women. Robina Eckford MacBrayne Scholarship, annual value £50, tenable for three years. Marshall Bursary, annual value £24, tenable for four years. Merchants' House Bursary, annual value £35, tenable for four years, open to women. John Oliphant Bursary, annual value £35, tenable for six years. James A. Paterson Bursaries, three each year of the annual value of £35, £25, and £15 respectively, each tenable for four years; students entering their second session are also eligible; open to women; examination in mathematics and natural philosophy.

Candidates for the aforementioned bursaries must take the university general bursary competition which is held each year in the month of June.

In addition, the following bursaries, scholarships, and prizes are open to students prosecuting their studies in the Faculty of Medicine; Arbroath Bursary, annual value £40, tenable for three years, is awarded by the Senate, on the recommendation of the Faculty of Medicine, to the student who is of the highest merit among the candidates as shown by their class records and their performances in the First and Second Professional Examinations. Arthur Bursary, annual value £20, tenable for three years, awarded to the *woman* student who takes the highest place among the Queen Margaret College candidates at the First Professional Examination. Mary Allan Bell Bursaries (five), annual value £50 each, tenable for three or four years, for students who have gone through the curriculum in arts; special examination, tenable also in theology or law. Brisbane Bursary, annual value £50, tenable for four years; candidates must be under 22 years of age, and must have taken the degree of M.A. William Gardiner Bursary, annual value £18, tenable for two years, awarded on results of the First and Second Professional Examinations in the subjects of physiology, chemistry, and physics. Dr. Thomas Gibson Bursary, annual value £50, tenable for four years; open to medical students entering on their second winter who are preparing for service as medical missionaries. Johnston Bursaries (two), annual value £25 each, tenable for three years, for eminence in the work and examinations of the first and second years of the curriculum. Lorimer Bursaries (six), value £20 each, tenable for one year, are awarded to the best students in each of the following classes: botany, zoology, physics, chemistry, anatomy, physiology. Macfarlane Bursary, annual value £40, tenable for three years, for students who have attended the first session of their professional study in the university; examination in elementary anatomy, elementary chemistry, and botany. Mackintosh Bursary, value £31, tenable for one year, open to medical students of either sex who have attended one of the courses of lectures on insanity; examination in that subject. John Monteith Bursary, annual value £21, tenable for two years, is awarded annually to the student who gains the highest number of marks in the subjects of anatomy and physiology at the professional examinations held during the previous year. Rainy Bursary, annual value £50, tenable for two years, for students entering on their third session of medical study; awarded to the candidate whose aggregate of marks in the subjects of anatomy and physiology of the Second Professional Examination, and in chemistry, botany, and zoology of the First Professional Examination, is the highest. A. and B. Stewart Bursaries, annual value £50 each, tenable for three years, for students who have gone through the arts curriculum; there is a special examination. Walton Bursary, annual value £40, tenable for four years; the Earl of Sandwich has the right of appointing to the bursary one of two students nominated by the Senate. Weir Bursary, value £25, tenable for one year, awarded on the results of the Second and Third Professional Examinations. Barbour Scholarship in anatomy or physiology, annual value £250, tenable for two years. Joseph Coats Memorial Scholarship, value £85, tenable for one year, for research in pathology, may be held concurrently with the Perman Memorial Scholarship (q.v.). Faulds Fellowship, annual value £250, tenable for three years, for medical research. Foulis Memorial Scholarship in pathology, value £50. Four McCunn Medical Research Scholarships, value £200 each, tenable for one year. Perman Memorial Scholarship, value £50, tenable for one year, for research in pathology, may be held concurrently with the Joseph Coats Memorial Scholarship (q.v.). The Junior Arnott Prize of about £15; the Senior Arnott Prize of £25. Three Bellahouston Gold Medals. The Brunton Memorial Prize of about £20. The Macewen Medal in surgery. The Captain H. S. Ranken V.C. Memorial Prize of £4 10s. The Straits Settlements Gold Medal. The West of Scotland R.A.M.C. Memorial Prize of about £15.

The Carnegie Trust for the Universities of Scotland is empowered to pay the whole or part of the university ordinary class fees of students of Scottish birth or extraction, under conditions given in the *University Calendar*, and summarized at page 363 of this issue. Scholarships and Fellowships are offered by the Carnegie Trust in science and medicine for post-graduation study.

Fees.—The matriculation fee for each year is £2 12s. 6d. In most cases the fee for each university class is £6 6s., but in some cases it is £4 4s. For hospital attendance at the Western Infirmary students pay £12 12s. for a perpetual ticket, or £1 11s. 6d. for a single term ticket, with an additional fee of £5 5s. for each winter and £2 12s. 6d. per term for each clinical course. The fees are the same at the Royal Infirmary. The university fees for the four professional examinations total £34 13s. For the whole curriculum the fees for matriculation, class attendance, hospital attendance, and professional examinations amount to about £250.

For further information apply to the Registrar, Glasgow University.

QUEEN MARGARET COLLEGE.—In this, the Women's Medical School of the University of Glasgow, the courses of study, degrees, regulations, fees, etc., are the same as for men. Women students have their own buildings, with classrooms, reading rooms, library, etc. They are taught in some classes apart from male students, in most together with them, but in either case have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, the Western Infirmary, and the Victoria Infirmary; also *inter alia* in the Royal Hospital for Sick Children, the Glasgow Ear Hospital, the Royal Asylum, Gartnavel, Hawkhead Asylum, the Ophthalmic Institution, the City of Glasgow Fever Hospitals, Belvidere and Ruchill, and the Glasgow Royal Maternity and Women's Hospital.

Scholarships.—The Arthur Scholarship, annual value £20, tenable for three years. Open to competition by medical students of first year at the First Professional Examination in October, 1931. This scholarship is restricted to women medical students.

Full information can be obtained from the Mistress, Queen Margaret College, Glasgow.

Board for Students.—University houses of residence for women students, Queen Margaret Hall and Robertson Hall, are situated near the college. The cost of board and residence is from 35s. to 42s. a week, according to accommodation. Applications to be made to the Wardens. Another hostel near the college is South Park House, Ann Street, belonging to the Student Christian Movement, and open to women students of all colleges in Glasgow. Cost of board is from 32s. to 35s. weekly. Applications to be made to the Warden.

ST. MUNGO'S COLLEGE.—This is the Medical School of the Royal Infirmary, which is the largest general hospital in Glasgow. The Infirmary is situated in Cathedral Square, Castle Street, and has car communication with every part of the city. St. Mungo's College is in the Infirmary grounds, and affords full courses in all the subjects of the medical curriculum, and in all the medical subjects of the dental curriculum.

The Infirmary has (including the ophthalmic department) 782 beds, 542 for surgical and 240 for medical cases. There are special beds and wards for diseases of women, of the throat, nose, and ear, burns, and septic cases. In the out-patient department in 1928 over 97,000 patients were treated. In addition to the large medical and surgical departments, there are departments for special diseases—namely, diseases of women, of the throat and nose, of the ear, of the eye, of the skin, and of the teeth. There is also a fully equipped electrical pavilion, with the latest and most improved apparatus for diagnosis and treatment.

Appointments.—Five house-physicians and eleven house-surgeons, who must be fully qualified, are appointed every six months, and board in the hospital free of charge. Clerks and dressers are appointed by the physicians and surgeons. As many cases of acute diseases and accidents of a varied character are received, these appointments are very valuable.

Fees.—The average class fee is £3 3s. for summer classes and £4 4s. for winter classes. The fees for all the lectures, practical classes, and hospital attendance necessary for candidates for the diplomas of the English or Scottish Colleges of Physicians and Surgeons amount to about £120. The classes are open to male and female students.

A syllabus of classes can be obtained on application to the Secretary to the Medical Faculty, St. Mungo's College, 86, Castle Street.

THE ANDERSON COLLEGE OF MEDICINE.—This school provides education in all subjects of the curriculum for both medical and dental students. The school buildings are situated in Dumbarton Road, immediately to the west of the University and Western Infirmary. The hospital practice and clinical lectures are provided in the Western or Royal Infirmary; pathology in the Western or Royal Infirmary; vaccination and dispensary practice in the Western or Royal Infirmary Dispensary. These classes are recognized by all the licensing corporations in the United Kingdom, also by the Universities of London, Durham, Glasgow, and Edinburgh (the latter two under certain conditions stated in the school Calendar).

Fees.—The fees for the lectures and practical work required by ordinary students range between 2 and 6 guineas a session. The Carnegie Trust pays the fees of students at Anderson College on conditions regarding which particulars may be obtained from the Secretary, Carnegie Trust Offices, Edinburgh.

A Calendar will be sent on receipt of a postcard by the Secretary to the Medical Faculty, the Anderson College of Medicine, Glasgow, W., who will forward any further information which may be desired.

The Royal Samaritan Hospital for Women, Glasgow, with 160 beds, offers facilities for clinical instruction in the diseases peculiar to women. A university lectureship, the Royal Samaritan Lectureship in gynaecology, is associated with the hospital. The lecturer is Dr. David Shannon.

Particulars may be obtained from Mr. T. Mason Macquaker, M.A., Secretary, 200, St. Vincent Street, Glasgow.

ST. ANDREWS AND DUNDEE.

THE medical departments in these two teaching centres cater specially for students proceeding to the degrees of the University of St. Andrews, but admit other students as well. In the former city the United College provides education in all subjects for the first two years. In Dundee, University College provides for the needs of students from the beginning to the end of the five years' curriculum. Its buildings are modern, and contain fully equipped laboratories. The clinical work of the school is facilitated by various institutions. The class fees are from £6 6s. to £5 12s. 6d. for systematic classes, and from £4 14s. 6d. to £4 4s. for practical classes. The hospital ticket is £1 8s. for three months, £4 4s. a year, or perpetual, £13 6s. 8d. in one sum. The inclusive or composition fee for the curriculum is £182. In connexion with both institutions there are bursaries and scholarships of considerable value, which are awarded after competitive examination. Information as to these can be obtained from the Secretary of the University of St. Andrews. Information regarding the clinical facilities may be obtained from the Dean of the Medical Faculty, Medical School, Dundee.

Clinical Work.

Good opportunities for clinical work are afforded by the Dundee Royal Infirmary, the instruction given thereat being recognized for purposes of graduation by all the Scottish universities, the University of Cambridge, the University of London, the National University of Ireland, and by the Royal Colleges of England and Scotland.

IRELAND.

THERE is a choice of six schools for those pursuing their medical studies in Ireland. For clinical instruction the choice is equally wide and varied, though the hospitals themselves are comparatively small. Some account of the schools follows.

DUBLIN.

School of Physic.

THIS school is in Trinity College, Dublin, and is carried on under the joint auspices of the University of Dublin and of the Royal College of Physicians of Ireland, the King's professors of institutes of medicine (physiology), practice of medicine, materia medica, and midwifery being appointed by the latter. Clinical instruction is given at Sir Patrick Dun's Hospital, and some twelve other metropolitan hospitals and asylums are recognized by the Board of Trinity College. The courses of instruction are open to all medical students, whether they belong to the university or not.

The Schools of Surgery.

These are schools carried on in Dublin under the supervision and control of the Council of the Royal College of Surgeons. They are formed of the college's own school, combined with two famous old medical schools—Carmichael and Ledwich; they are attached to the college by charter. The buildings contain spacious dissecting rooms, special pathological, bacteriological, public health, chemical, and pharmaceutical laboratories. Advantage can be taken of the lectures and instruction afforded by students otherwise unconnected with the college.

Prizes.—Among the prizes annually awarded are: The Barker Anatomical Prize (£26 5s.); the Carmichael Scholarship (£15); the Mayne Scholarship (£8); the Gold Medal in surgery; the Stoney Memorial Gold Medal in anatomy; the H. Macnaughton Jones Gold Medal for midwifery and gynaecology; the Captain Massey Miles Memorial Prize; class prizes, accompanied by silver medals, will also be given in each subject. At intervals a prize of £150 is awarded, called the R. Dancer Purefoy Memorial.

A prospectus can be obtained post free on application to the Registrar, Royal College of Surgeons, Dublin.

University College, Dublin.

This is one of the constituent colleges of the National University of Ireland. The arrangements for the teaching of medical students from beginning to end of the curriculum are adequate. Applications for information may be addressed to the Secretary and Bursar, University College, Dublin.

Clinical Teaching in Dublin.

There are numerous well-arranged hospitals in and around the city, and almost all of these are recognized for teaching purposes by the Conjoint Board of Ireland, the University of Dublin, the National University of Ireland, and by like bodies elsewhere in the British Isles. Among them are the Mater Misericordiae Hospital, with 345 beds; Dr. Steevens's Hospital at Kingsbridge, with 150; Meath Hospital and County Dublin Infirmary, with 160; Mercer's Hospital, with 120; the Royal City of Dublin Hospital, with 124; the Adelaide Hospital, with 160; the Royal Victoria Eye and Ear Hospital, with 100 beds; Sir Patrick Dun's Hospital, which has a direct connexion with the School of Physic, and the combined institutions formed by the Hardwicke Fever Hospital, the Richmond Surgical Hospital, and the Whitworth Medical Hospital, with an aggregate of 330 beds.

As for the famous Dublin medical institution known as the Rotunda Hospital, this practically consists of two distinct hospitals, and is believed to be the largest combined maternity and gynaecological hospital in the British Isles. There are ante-natal and paediatric departments as well as a thoroughly equipped pathological laboratory, and *x*-ray apparatus. It possesses residential quarters for students, and, taken as a whole, offers exceptional opportunities for study both to ordinary students and to medical graduates of any nationality. During the past year 3,182 patients were admitted to hospital, this total being made up of 2,424 maternity cases and 758 gynaecological cases; 1,793 patients were attended at their own homes and 11,041 attended the dispensary.

Two other important obstetric and gynaecological hospitals in Dublin are the Coombe Lying-in Hospital and the National Maternity Hospital. During the year ending December 31st, 1929, the number of cases dealt with in the Coombe Lying-in Hospital were as follows: intern maternity department, total admissions 1,204; intern maternity department, total deliveries 1,080; extern maternity department, total deliveries 1,432; gynaecological department, number of operations 361.

At the National Maternity Hospital, Holles Street, Dublin, 1,413 patients were admitted to hospital during the year ending March 31st, 1930; total deliveries in hospital were 961; gynaecological operations 371; and dispensary attendances 7,843.

The practice of these hospitals is attended by large numbers of students, post-graduates, and nurses.

BELFAST.

THE Medical School is part of the Faculty of Medicine of Queen's University, Belfast, and provides a complete medical curriculum for all purposes. The laboratories in connexion with the departments of bacteriology, biochemistry, biology, chemistry, physiology, pathology, anatomy, physics, and materia medica are all excellent, and there is a students' union which gives students the advantages of dining rooms, reading rooms, a library, and various recreation rooms. Women are eligible as students. Clinical instruction is given at the Royal Victoria Hospital, which was rebuilt a few years ago and has 300 beds, and the Mater Infirmorum Hospital, which has 150 beds. Other hospitals open to the students of the university are: the Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital; the Benn Ulster Eye, Ear and Throat Hospital; the Union Infirmary and Fever Hospital; the Fever Hospital, Purdysburn; the District Lunatic Asylum, the Samaritan Hospital, Forster Green Hospital for Diseases of the Chest, and the Belfast Hospital for Skin Diseases.

Scholarships.—(1) Eight, of the value of £40 each, are assigned as Entrance Scholarships in the Faculties of Arts, Science, and Medicine, tenable for one year; (2) fourteen Professional Scholarships, value from £15 to £40 each; (3) one Hutchinson Stewart Scholarship, £12, in mental diseases; (4) one Mackay Wilson Travelling Scholarship, £100, awarded triennially; (5) Isabella Tod Memorial Scholarship, tenable for three years, awarded triennially

to a woman student; (6) Magrath Clinical Scholarship, awarded annually, value about £112; (7) two Musgrave Studentships of £200 in physiology and pathology. There is also a post-graduate research fund, open to all graduates of not more than three years' standing. Gold medals are awarded at the M.D. examination.

Fees.—The cost of the curriculum intended for students proceeding to the degrees of the Queen's University of Belfast is, approximately, £200. This includes examination fees and a perpetual ticket for attendance at the Royal Victoria Hospital or the Mater Infirmorum Hospital, and fees for the special hospitals. The course for the Conjoint Board costs about the same amount.

The Regulations of the Medical Faculty, containing full information, can be obtained on application to the Bursar, Queen's University, Belfast, price 4d.

UNIVERSITY COLLEGE, CORK.

THIS institution, formerly known as Queen's College, Cork, is one of the constituent colleges of the National University. It holds examinations for all the faculties of that university, in addition to continuing the work which it has hitherto performed—namely, that of providing education adapted to the needs of medical students at all stages of their career. Its first aim is to fit students for the degrees of the National University, but students proceeding for the examinations of the Conjoint Board of England, Scotland, or Ireland, the Society of Apothecaries of London, or the Apothecaries' Hall of Ireland, or London University, can arrange the courses of lectures which they attend, and the order in which they attend them, to meet the requirements of those bodies. Certificates of attendance at the college courses are also accepted by the University of Cambridge. Clinical instruction is given at the North and South Infirmaries (each 100 beds) and at the Cork Union Hospital (1,200 beds). Students can also attend the Mercy Hospital (130 beds), the County and City of Cork Lying-in Hospital, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglinton Lunatic Asylum. The session extends from October to June.

There is a Dental School in which the degree of Bachelor of Dental Surgery of the National University of Ireland can be obtained. There is a large well-equipped dental hospital in connexion with the school.

Scholarships.—About £3,000 is available annually for scholarships in the college. Particulars as to each of them can be obtained on application to the Registrar.

Fees.—The fees for the lectures and hospital attendances required by the National University of Ireland course, including examination fees, come to about £170.

Further information can be found in the Calendar or obtained on application to the Registrar.

UNIVERSITY COLLEGE, GALWAY.

THIS institution is one of the constituent colleges of the National University of Ireland, and includes Faculties of Art, Science, Law, Celtic, Engineering, Commerce, and Medicine. The college buildings are well lighted and well ventilated, and contain dissecting rooms, an anatomical theatre, and laboratories for the study of physiology, chemistry, physics, and other departments of medical science. For pathology and chemistry new laboratories are now provided. It has good grounds surrounding it, and there are many arrangements, such as a library, a college union, and an athletic union, for the benefit of those belonging to the Medical Faculty, as well as for students in other departments of the college. The clinical teaching, which is recognized as qualifying not only for the degrees of the National University, but for those of the London University and the diplomas of the various colleges in the three kingdoms, is carried on at the Galway Central Hospital and the Galway Tuberculosis Hospital. The Galway Central Hospital is a general hospital, and at the two hospitals students have ample opportunities of studying zymotic and chronic diseases. The Central Hospital has a special ward for diseases of children. Each year the governing body offers about £2,500, and the County Councils of Connaught offer about £3,500, in scholarships. These scholarships are tenable in any faculty. Additional information regarding these scholarships can be obtained on application to the Registrar, and to the Secretaries of the Connaught County Councils.

CLINICAL HOSPITALS IN ENGLAND.

MANY hospitals in Great Britain and Ireland, though not connected with any medical school, open their doors either to those who have yet to be qualified, to those who are doing post-graduation work, or to both. The facilities they offer for gaining practical clinical experience are very great, and should not be overlooked. Their honorary staffs commonly make a point of giving such instruction as opportunity offers, and at those situated in the larger towns there are often appointments as clinical assistants to be obtained. In addition, they all have to offer, at shorter or longer intervals, appointments for resident medical officers, house-physicians, and house-surgeons. These are usually paid offices, which may be held for periods varying from six months to a year, or even longer. Some of those situated in the great medical centres in the provinces, and in Scotland and Ireland, have already been mentioned in speaking of the medical schools in these localities; but it should be added that there are many other provincial hospitals where admirable work is done, and at which much valuable experience can be gained by both senior and junior students, and by those already qualified. Cases in point are the Royal Infirmary, Bradford; the Royal Sussex County Hospital, Brighton; the Royal United Hospital, Bath; the Kent and Canterbury Hospital; the Derbyshire Royal Infirmary; South Devon and East Cornwall Hospital, Plymouth; the Royal Albert Hospital and Eye Hospital, Devonport; the Royal Devon and Exeter Hospital; the West of England Eye Infirmary, Exeter; the Gloucestershire Royal Infirmary and Eye Institution; the Royal Infirmary, Leicester; the County Hospital, Lincoln; the General Hospital, Northampton; the Norfolk and Norwich Hospital; the General Hospital, Nottingham; the Royal Portsmouth Hospital; the Royal Berks Hospital, Reading; the Royal South Hants and Southampton Hospital; the Staffordshire General Infirmary, Stafford; the North Staffordshire Infirmary at Hartshill; the Royal Hants County Hospital, Winchester; the Wolverhampton and Staffordshire General Hospital; the County Hospital, York; and the Coventry and Warwickshire Hospital.

London Clinical Hospitals.

As for the hospitals in the metropolis, so many of these take a share in the giving of clinical instruction that it is worth while to classify them.

Children's Hospitals.—There are at least seven of these, the leader among them being the Hospital for Sick Children, Great Ormond Street, which has 268 beds. There are also the East London Hospital for Children, Shadwell, with 136; the Queen's Hospital for Children, Bethnal Green, with 134; the Victoria Hospital for Children, Chelsea, with 130; the Belgrave Hospital for Children, which has a considerable out-patient department, and in-patient accommodation for 74 children; the Paddington Green Children's Hospital; and the Evelina Hospital for Sick Children, Southwark Bridge Road, with 76 beds. The largest and the oldest of the hospitals for both women and children is the Royal Waterloo Hospital for Children and Women, Waterloo Road, S.E.1.

Hospitals for Women.—Queen Charlotte's Maternity Hospital, Marylebone Road, with 75 beds and a residential college for medical students and practitioners, specializes in the teaching of midwifery. The first section of the new Queen Charlotte's Hospital in Goldhawk Road, Hammersmith, was opened on July 10th last. The City of London Maternity Hospital, City Road, with 71 beds, also admits medical students and graduates to its practice. The Samaritan Hospital for Women, Marylebone Road, admits qualified practitioners as clinical assistants to both the in-patient and out-patient departments; demonstrations are given daily in both departments, the fees—payable in advance—being £3 3s. for three months; full particulars may be obtained from the secretary. In addition may be mentioned the Hospital for Women, Soho Square, whose teaching is confined to post-graduates in limited numbers; the Chelsea Hospital for Women, Arthur Street, Chelsea; and the Elizabeth Garrett Anderson Hospital for Women in Euston Road, the latter being in the nature of a general hospital so far as concerns the class of case treated.

Eye Hospitals.—The largest of these is the Royal London Ophthalmic Hospital (Moorfields), City Road, E.C.1, 138 beds; 2,534 in-patients, 51,924 out-patients in 1929. At this hospital two complete courses of instruction are given during the year—October to February, and March to July—comprising the following subjects: (1) anatomy (including histology and embryology), (2) physiology, (3) optics (including physiological optics), (4) refraction classes, (5) methods of examination and use of the ophthalmoscope, (6) pathology and bacteriology, (7) ophthalmic medicine and surgery, (8) ophthalmoscopic conditions, (9) operative surgery, (10) practical pathology, (11) practical bacteriology, (12) radiology, (13) physiotherapy (including ultra-violet light, diathermy, and ionization), (14) slit-lamp microscopy. A fee of 35 guineas will

admit the holder once to all the lectures and classes, except those on physiotherapy and slit-lamp microscopy. The fee for a perpetual ticket to attend the practice of the hospital is £5 5s.; for three or six months, £3 3s.; for two months, £2 2s.; for one month, £1 1s. Registered medical practitioners and medical students are eligible, under certain conditions, for the posts of chief clinical assistant, clinical assistant, and junior assistant. There are also a number of salaried posts, an annual Clinical Research Scholarship of £50, and a biennial Gifford Edmonds Prize of £100. Clinical work begins each morning at 9 and operations at 10 o'clock. The course of instruction is specially adapted to meet the requirements of those reading for the D.O.M.S. and similar diplomas and degrees in ophthalmology. Further particulars may be obtained from the Dean of the Medical School. Other eye hospitals are the Royal Westminster Ophthalmic Hospital, now rebuilt on a new site in Broad Street, High Holborn, and containing 84 beds; the Royal Eye Hospital, Southwark, and the Central London Ophthalmic Hospital, Judd Street, W.C.1, each with about 40 beds; and the Western Ophthalmic Hospital with 18 beds.

Fever Hospitals.—The London County Council has under its control a number of institutions in and around London for the treatment of the more serious zymotic disorders; it makes special arrangements for the instruction of students in this subject, and grants certificates at the end of the courses. Detailed information should be sought from the Medical Officer of Health, Special Hospitals Division, London County Council, Victoria Embankment, E.C.4.

Chest Hospitals.—The largest of these is the Brompton Hospital for Consumption, which has 333 beds and a large sanatorium at Frimley with 150 beds. There is also the City of London Hospital for Diseases of the Chest, Victoria Park, with 185 beds, and the Royal Hospital for Diseases of the Chest, City Road, with 85 beds, now amalgamated with the Royal Northern Hospital, Holloway Road.

Nose, Throat, and Ear Hospitals.—The institutions which confine their work to disorders of the throat, nose, and ear all make special arrangements for the benefit of senior and post-graduate students. They are the Metropolitan Ear, Nose, and Throat Hospital, Fitzroy Square; the Royal Ear Hospital, Huntley Street, W.C.1 (now the Ear, Nose and Throat Department of University College Hospital); the Central London Throat, Nose, and Ear Hospital, Gray's Inn Road; and the Hospital for Diseases of the Throat, Golden Square—the last, which possesses 95 beds, being the largest of the four institutions.

Miscellaneous Special Hospitals.—Among these are the Bethlem Royal Hospital, now in course of transference from Kennington to a large new site at Eden Park, Beckenham, which (like the Maudsley Hospital) confines its work to the treatment of mental diseases, and includes a department for nervous and early mental disorders; the Royal National Orthopaedic Hospital, Great Portland Street; St. Peter's Hospital for Stone and Urinary Diseases, Henrietta Street, Covent Garden; St. Mark's Hospital, City Road, which devotes itself to the treatment of diseases of the rectum, including cancer and fistula; the National Hospital for Diseases of the Heart in Westmoreland Street, W.1; St. John's Hospital for Diseases of the Skin in Leicester Square; the Hospital for Diseases of the Skin, Stamford Street, Blackfriars; the National Hospital, Queen Square, W.C.1, an institution possessing 200 beds for neurological cases and a world-wide reputation; and the West End Hospital for Nervous Diseases, 73, Welbeck Street, W.1.

Detailed information as to the teaching arrangements of all these institutions may be obtained on application to their secretaries.

WOMEN IN MEDICINE.

THE regulations of the General Medical Council and of the various universities and colleges set out in previous sections apply to women as to men.

EXAMINATIONS.

Women are admitted to all the medical examinations of the following qualifying bodies: all the universities of Great Britain and Ireland; the Royal College of Physicians of London; the Royal College of Surgeons of England; the Society of Apothecaries of London; and the Conjoint Boards of the Colleges in Scotland and in Ireland. In addition, women are eligible for election as Fellows of the Royal College of Physicians of London and the Royal College of Physicians of Edinburgh.

MEDICAL EDUCATION.

The general tendency during the years since the war has been to admit women to train in medicine at the same schools and under very much the same conditions as men. In this country at the present time co-education is the general rule. The schools of the London hospitals have, however, so far shown themselves more conservative in this respect than the rest of the country.

In England the colleges connected with the universities of Birmingham, Bristol, Cardiff, Leeds, Liverpool, Manchester, Newcastle, and Sheffield admit women students as well as men, whilst in Scotland the universities of Aberdeen, St. Andrews, Edinburgh, and Glasgow also admit women. In Ireland all universities and colleges are open to them.

Although in London the only schools open to medical women students are the London School of Medicine for Women and, to a modified extent, University College Hospital, it is felt that such a state of affairs can only be temporary, and hopes can be entertained that in the near future the principle of co-education will prevail in the capital.

At the present time it will be seen that the only co-education hospital in London is that of University College—the number of women entrants is restricted to twelve a year, but these twelve (making between thirty-six and forty-eight training at any one time for the three to four years' clinical course) are given excellent opportunities whilst students, and also, in fair proportion, are given opportunities of post-graduate experience as residents—house-surgeons, house-physicians, and obstetrical assistants.

NUMBER OF WOMEN MEDICAL STUDENTS.

Returns made to the University Grants Committee at the end of 1929 showed that the total number of full-time women medical students attending university institutions in England, Scotland, and Wales during the past five years were:

	1924–25.	1925–26.	1926–27.	1927–28.	1928–29.
England	1,197	1,059	930	862	824
Wales	32	30	32	30	14
Scotland	431	313	274	254	270
Total	1,650	1,402	1,236	1,146	1,108

THE LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

The London (Royal Free Hospital) School was started for the training of women in medicine in the days before there were any co-education facilities for them, and it still remains by far the largest school for women. In addition to the clinical work at the Royal Free Hospital, which at present has 268 beds, but will shortly have 360 when the extensions now in progress are completed, arrangements are made for students of the school to obtain clinical instruction at the National Hospital for Nervous Diseases, Queen's Square; the Royal London Ophthalmic Hospital, Moorfields; the Great Ormond Street Hospital for Children; the Elizabeth Garrett Anderson Hospital; the South London Hospital for Women; and the Cancer Hospital. Its importance for women in medicine can hardly be overestimated, not merely because it was the pioneer which made the way possible, but also because it is still the only general hospital in Britain which offers all its post-graduate appointments, higher and lower, to open competition by women as well as men, thus giving unique opportunity of gaining experience. Not only are all the resident appointments at the Royal Free Hospital, of which there are twenty-seven yearly, eligible for women, but, in addition, higher posts may be obtained in all the various branches of a general hospital, from those of registrar and anaesthetist to those of visiting physician or surgeon and those in charge of special departments. There is a special unit in gynaecology under a woman professor, and entirely staffed by medical women. This policy has so far not been fully adopted in its entirety by any other hospital, and it may be of interest to note in this connexion that the Royal Free Hospital has many women on its general committee and weekly board of management.

OPENINGS FOR MEDICAL WOMEN.

There are at the present time the names of over three thousand medical women on the *Medical Register*. There is an increasing demand by the public for the services of women doctors in all branches of medicine, and statistics show that the number of those who make good is as high as, if not somewhat higher than, that of their men colleagues.

OPENINGS AT HOME.

Since the number of men and women qualifying has reached normal standards, medical women on qualification find no difficulty in obtaining house appointments in the recognized teaching hospitals and in non-teaching hospitals, hospitals for women and children, sanatoriums, etc.

General Practice.—There are good openings as assistants or, better still, as assistants with a view to admission as partners in general practice. Medical women also do very well when starting in new districts; and there is considerable scope for them in midwifery work.

Specialist and Consulting Practice.—The number of women doing specialist and consultative practice grows rapidly. There is no branch of medicine in which it is not possible for a patient to consult a medical woman. Women so specializing equip themselves by obtaining the highest essential qualifications, and it is hoped that the time is not far distant when many more women will hold positions on the honorary staffs of all hospitals. Already medical women are on the honorary staff of the Royal Free Hospital, London, and of general hospitals in a number of provincial cities. In London, Edinburgh, Glasgow, Manchester, and Brighton there are hospitals staffed entirely by medical women, doing very fine work and meeting a real need, the latest to be opened being the Marie Curie Hospital in London for the treatment of cancer by radium. Research work also provides interesting openings, as, for example, in dealing with the special problems concerning cancer, nutrition, puerperal morbidity and mortality, statistical work, etc., and for some of these research scholarships and grants are available.

Teaching Posts.—Women hold professorships and lectureships at various universities.

Industrial Medicine.—In this branch there is much interesting work available, and it is undergoing considerable development at the present time. Several women already hold such posts.

Administrative Work.—A certain number of these important posts are admirably filled by medical women. The chief medical officer for maternity and child welfare is a medical woman, and has a staff of medical women to assist her.

The Public Health Service.—This service provides numerous openings for medical women. It has many departments, and its rapid growth in recent years has provided much interesting work in preventive medicine. In this connexion it may be noted that a medical woman has recently been appointed medical officer of health to a large borough council, and senior departmental posts are frequently held by medical women. For maternity and child welfare work women have been found to be peculiarly suited; but, by a curious economic limitation, married women, who would appear to be the most suitable of all, are, by many public authorities, excluded from service. This exclusion not only prevents married women from taking part in this work, but also prevents many of the best women from specializing in this branch of medicine, as it is obviously uneconomic to specialize in a branch of public service from which one may be excluded in a few years.

Medical Inspection, etc.—Under the Board of Education there are women serving as medical advisers and school medical inspectors. The London County Council and other important councils in the country have medical women on their permanent medical staffs, in both the senior and junior grades. The London County Council has two of its senior medical women appointed to serve as district medical inspectors. In addition, they have a large number of women medical inspectors of school children, and also women are serving as experts in the departments dealing with mental deficiency, tuberculosis, and venereal disease. Some medical women also serve as examiners of the candidates entering the public services, as, for example, the civil service. The services of medical women are extensively enlisted by public authorities in dealing with employees of their own sex. In several instances women serve as assistant medical officers to prisons. The services of medical women are also enlisted as lecturers and examiners on first aid, home nursing, health, and infant care.

PAY AND STATUS.

It is interesting to note that medical women, backed by the powerful assistance of the British Medical Association, have been on the whole successful in resisting the attempt to accept a lower salary for the same work as their men colleagues, thereby not only greatly benefiting themselves, but also maintaining the standard for the whole profession. They realize that ever since the admission of women to the medical profession exactly the same sacrifices for principle have been made by their predecessors as are now demanded from them. With the inauguration of the School Medical Service in 1908, and later when maternity and child welfare posts were created, persistent efforts were made by local authorities to pay their assistant medical officers below the minimum arranged by the representatives of the public authorities and the British Medical Association, and to secure women at a lower rate than men. With rare exceptions these efforts were a failure. Women realize as clearly as men that lowered pay invariably implies a lowered status and prestige, and that the woman who stamps herself as belonging to an inferior grade of doctor cannot complain if she is taken at her own valuation, and that a minimum always tends to become a maximum. Attempts to evade the scale and split the ranks of the profession by offering a post to a man at the agreed rate and a similar post to a woman slightly below that rate are particularly to be deprecated. Where the rule of equal pay for equal work is violated there is no limit to the extent to which women may be exploited and sweated.

OPENINGS ABROAD.

Colonial Office.—To those to whom oversea service appeals it offers the possibility of useful, interesting, and adequately paid work. At present there are posts for women in Malaya, and East and West Africa. The work is almost entirely hospital and maternity and child welfare work; there have been one or two specialist appointments, such as bacteriologists, and more may follow. Women have, so far, only been appointed to the lower grade posts, but their pay is the same as that of the men in similar grades. When placed on the permanent staff they are eligible for pension.

Egypt.—Appointments in the Kitchener Memorial Hospital, Cairo, which forms part of the Clinical Faculty of the University of Cairo, are held by women. Appointments in certain dispensaries are open to medical women. There are also posts held under the education authority, chiefly school medical inspection.

India.—See note on the Women's Medical Service for India on page 384.

Mission Field.—Missionary societies offer employment to medical women, chiefly in India, China, and the Near East.

PUBLIC ACTIVITIES.

Medical women are frequently appointed to serve on Royal Commissions and Government Committees dealing with medical subjects, and are also requested by them to give evidence of an expert medical nature.

Medical women have always shown considerable interest in medico-political affairs, and take an active part in the work of the British Medical Association, and with the various other societies dealing with medicine as it affects the community in general. With this end in view they also have a Medical Women's Federation, which enables them to voice a collective expression of opinion. This might otherwise be difficult to ascertain, as women are so widely scattered, both as regards their geographical distribution and their varied activities. This collective opinion of medical women has been found of great assistance by the British Medical Association and other allied societies with which it works in cordial co-operation and by whom it is frequently approached, both for information and also as a convenient means of approaching medical women as a whole.

It may be added, with regard to contributions to medical literature, that this is a branch of work in which women are more and more taking their share, and scientific and other works are frequently published by them.

WOMEN'S MEDICAL SERVICE FOR INDIA.

AMONG careers open to medical women abroad the Women's Medical Service for India deserves honourable mention. This service is open to fully qualified medical women of British or Indian nationality. With the present amount of Government subsidy the number of medical officers is limited to 44.

Medical women proceeding to India to join the Women's Medical Service receive a sufficient sum for a first-class passage to India. On landing they are posted to one of the larger women's hospitals to gain Indian experience and to learn the language. For a further period they are appointed to act temporarily for medical women on furlough. They are then definitely appointed to the charge of hospitals. Private practice is allowed, provided it does not interfere with official duties. The only exception is in administrative or educational posts, when an allowance in lieu of practice is given. The amount obtained by practice varies according to the station, but in most cases it forms a fair addition to the salary, varying from £150 to £1,000 a year.

Excellent opportunities for surgery—especially gynaecological—are found in the Women's Medical Service. For those who are not keen surgeons opportunities are likely to occur in the future in connexion with maternity and child welfare. Rates of pay are as follows:

Years of Service.	Rates of Pay per mensem.	Annual Salary.
1-3	Rs. 450	£440
4-6	Rs. 500	£480
7-9	Rs. 550	£520
10-12	Rs. 600	£560
13-15	Rs. 650	£600
16-18	Rs. 700	£640
19-21	Rs. 750	£680
22-24	Rs. 800	£720
Over 24	Rs. 850	£760

Furnished quarters are provided, representing an addition of Rs. 150 per mensem. The oversea allowance of Rs. 100 per mensem rises to Rs. 150 after twelve years' service. The value of the rupee is taken at 1s. 4d.

The cost of living in India is much higher than formerly, but it should be possible for a medical woman (with house provided) to meet actual household expenses on about Rs.300 per mensem, leaving the remainder of her salary for dress and personal expenses. To this must be added the necessary saving to meet additional expenses for furlough and leave spent in the hills.

Leave on average pay is earned at the rate of two-elevenths of the period spent on duty.

Study leave may be granted to the extent of twelve months in the total service, and will not be granted more than twice in the course of an officer's service. During study leave an officer draws half her average pay, with a study allowance at the rate of 12s. a day during the course of study.

Officers of European domicile are entitled to four free return first-class passages from a port in India to a port outside India during their whole period of service. The first passage is not granted until four years' approved service has expired, and thereafter passages may be granted at intervals of not less than four years.

There is a Provident Fund to which members of the service contribute 10 per cent. of their pay. The service contributes another 10 per cent., which accumulates at interest and is repaid on retirement.

Admission to the service is made by selection in India and England, preference being given to those with Indian experience. Vacancies are few. Candidates in the United Kingdom should apply to the Secretary, U.K. Branch of the Countess of Dufferin's Fund, c.o. Lieut.-Colonel Sir Leonard Rogers, India Office, Whitehall, S.W.1.

POST-GRADUATE STUDY.

NOTWITHSTANDING the large and varied amount of material available, post-graduate study in London suffers from several disabilities, which have become increasingly obvious during recent years. In the first place, teaching centres are widely scattered, and it is not easy for the student to obtain everything he requires under one roof, or even in the same district. Secondly, no definite post-graduate school exists at which the graduate can obtain directions for a course to suit all his needs. Thirdly, there is no recognized hostel or meeting place to which the student can resort for social purposes. While several institutions in London have endeavoured to meet one or other of these needs, their efforts have been on a small scale, and it has long been apparent that "the post-graduate habit" would not be developed until a centre for post-graduate medical education had been established.

Post-graduate students may be divided into general practitioners desirous of refresher courses to bring their general knowledge up to date; those who wish for instruction in special subjects with a view to obtaining one of the special diplomas, or of preparing for examination for promotion in one or other of the services, or—if already general practitioners—of adding some form of specialism to their work; and finally, visitors from the Dominions or abroad anxious to study the methods of British experts. As things stand at present, the general practitioner may perhaps find a refresher course at the hospital at which he was trained, held during a vacation, and designed specially to bring his knowledge up to date; or he may approach the Fellowship of Medicine, which was amalgamated with the Post-Graduate Medical Association in 1919, and has an office generously placed at its disposal by the Royal Society of Medicine at 1, Wimpole Street, W.1. At this office a list of hospitals, special and general, to which medical graduates may resort, with or without fee, is kept, and the names of the teachers at each hospital are available. Definite courses of study at individual hospitals are also organized by the Fellowship. The West London Hospital at Hammersmith, and the Prince of Wales's General Hospital at Tottenham, have for many years had post-graduate colleges attached to them, thus overcoming, to the extent of their resources, the disabilities mentioned above. Courses of lectures and instruction for qualified practitioners are given at many special hospitals; and in the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, opened last year, it is possible to obtain under one roof instruction in all branches of preventive medicine. The work of the school has been arranged in the following divisions: public health, including a section devoted to the physiology of hygiene; epidemiology and vital statistics; bacteriology and immunology; biochemistry, including a department for chemistry as applied to hygiene; medical zoology, embracing the departments of protozoology, helminthology, and entomology; and, finally, tropical medicine and hygiene, of which the Director, Sir Andrew Balfour, has charge, and which embraces clinical work in diseases of the Tropics, for which facilities are afforded by the Hospital for Tropical Diseases in Gordon Street.

In the provinces the Universities of Oxford, Cambridge, Birmingham, Bristol, Liverpool, Manchester, and Sheffield have organized courses. Edinburgh receives graduates from many schools in the Dominions as well as in this country. In Glasgow and Aberdeen courses are available; and in relation with the University of St. Andrews courses are given by the staff of the James Mackenzie Institute for Clinical Research. At many of these centres the teaching is provided by way of whole-time intensive courses, by part-time courses, or by means of clinical assistantships. The Joint Tuberculosis Council has provided nomadic courses in its own special subject.

Short particulars about the facilities for post-graduation study at present obtainable in Great Britain and Ireland are given in Section VI of the *Handbook for Recently Qualified Practitioners* published by the British Medical Association (price 3s. 6d.).

BRITISH POST-GRADUATE HOSPITAL AND SCHOOL.

During the past few months a very important step has been taken towards remedying the defects indicated in the opening paragraph of this section. As long ago as 1921 a committee under the chairmanship of the Earl of Athlone was set up by Dr. Addison when Minister of Health. The ground was rapidly surveyed and proposals were submitted, but the chief recommendation, for "a school attached to a hospital centrally situated in London devoted solely to post-graduate medical education, as a school of the University," remained unfulfilled. In 1925 Mr. Neville Chamberlain appointed a second committee with a single clear-cut reference: "To draw up a practicable scheme of post-graduate medical education centred in London." The report of this representative committee was issued in April last, and the scheme it unanimously put forward has been accepted by the Government. The

contents of the report were summarized in the *British Medical Journal* of April 19th (p. 745).

Briefly stated, the "practicable scheme" finally arrived at, after weighing many alternatives, is for the establishment of a British Post-Graduate Hospital and Medical School, comprising a hospital with 400 beds, a medical school, and residential facilities for students, by converting the Hammersmith Hospital at Shepherd's Bush. This modern institution, now under the control of the London County Council, has the 400 beds needed at the outset. To complete the scheme a fully equipped medical school will have to be built on the 14 acre site, and a hostel for graduate students established in central London. The Government, impressed with the urgency of the need and the feasibility of the plan, has pledged itself to contribute from public funds a maximum capital sum of £250,000 for building and equipping the post-graduate school, and beyond this to provide annual grants towards its upkeep through the University of London. The committee assumed that the cost of maintaining the hospital would fall, as at present, on the ratepayers. For the hostel money must be found by way of a public appeal, which has since been issued.

A great step forward has thus been taken. A comprehensive and practicable scheme has been framed, a site and money have been found, and if the several parties to the undertaking work harmoniously, with one goal in view, the capital of the British Empire will become in time a world-centre of post-graduate medical training. The site chosen, though accessible, is not perhaps as central as could be wished, but it is fully large enough to contain the school buildings and to allow of additions to the existing hospital. Further, an essential point made by the Athlone Committee—that the central post-graduate medical school, when established, should be a school of the University of London—has been recognized and accepted by the Government.

The Minister of Health, after consultation with the London County Council and the Senate of the University of London, has now appointed a Provisional Organization Committee to proceed with the action necessary to secure the establishment of the British Post-Graduate Hospital and Medical School. The terms of reference of this committee are to consider and report, in pursuance of the statement made by the Minister of Health in the House of Commons on April 9th, upon (1) the action requisite to lead up to the planning and construction of the medical school, and (2) the form of government appropriate to the hospital and medical school, with special reference to the position of the London County Council as the local authority responsible for the hospital, and to the position of the University of London in relation to the medical school.

The chairman of the committee is Viscount Chelmsford. The Ministry of Health is represented by Sir George Newman, chief medical officer, and Mr. M. Heseltine, an assistant secretary; the London County Council by Dr. Florence Barrie Lambert, Sir William Ray, Mr. Angus N. Scott, and Mr. L. Silkin; and the University of London by the vice-chancellor, the chairman of convocation, Mr. H. L. Eason, superintendent and senior ophthalmic surgeon, Guy's Hospital, and Dr. Edwin Deller, principal of the university. The other members of the committee (all of them members of the medical profession) are: Mr. Donald J. Armour, senior surgeon, West London Hospital; Lady Barrett, dean of the London (Royal Free Hospital) School of Medicine for Women; Mr. Comyns Berkeley, obstetric surgeon, Middlesex Hospital; Sir Robert Bolam, physician to the Skin Department, Royal Victoria Infirmary, Newcastle-on-Tyne, and past Chairman of Council, British Medical Association; Dr. H B. Brackenbury, Chairman of Council, British Medical Association; Mr. H. W. Carson, senior surgeon, Prince of Wales's General Hospital, Tottenham; Dr. H. G. Dain, chairman of Insurance Acts Committee, British Medical Association; the Right Hon. Lord Dawson of Penn, physician, London Hospital; Dr. H. R. Dean, professor of pathology, Cambridge University; Sir Walter M. Fletcher, secretary of the Medical Research Council; Mr. G. E. Gask, professor of surgery, London University, and surgeon, St. Bartholomew's Hospital; Sir Thomas Horder, Bt., physician, St. Bartholomew's Hospital; Dr. F. N. Kay Menzies, medical officer of health for the County of London; Lord Moynihan of Leeds, President of the Royal College of Surgeons of England, consulting surgeon, Leeds General Infirmary; Mr. H. J. Paterson, senior surgeon, London Temperance Hospital, and honorary secretary, Fellowship of Medicine and Post-Graduate Association; Dr. Harold Pritchard, senior physician, West London Hospital; and Sir Holburt Waring, senior surgeon, St. Bartholomew's Hospital.

Mr. Heseltine is acting as secretary, and all communications on the business of the committee should be addressed to him at the Ministry of Health, Whitehall, S.W.1.

Fellowship of Medicine and Post-Graduate Medical Association.

The Fellowship of Medicine has arranged regular courses in general medicine and surgery, including special departments, each lasting two weeks; the fee for each course is 3 to 5 guineas. Courses in diseases of the chest, children, ante-natal, heart, nervous system, throat, nose, and ear; dermatology; gynaecology; proctology; psychological medicine; tropical medicine; urology; and venereal diseases are given from time to time at the special hospitals in association with the Fellowship of Medicine. Evening courses for the M.R.C.P. and F.R.C.S. (Final) are arranged also. The Fellowship "General Course" Programme contains a diary of the arrangements available for post-graduates in various general and special hospitals in London. The list for the immediate future special courses includes a two weeks' course in general medicine and surgery, from September 15th to 27th, at the Westminster Hospital; in diseases of children, at the Queen's Hospital, from September 1st to 13th; and in psychological medicine, at the Bethlem Royal Hospital, from September 16th to October 11th. The office of the Fellowship is, by kind permission of the Royal Society of Medicine, at No. 1, Wimpole Street, W.1 (telephone, Mayfair 2236). The secretary is in attendance daily from 10 a.m. to 5 p.m., excepting Saturday. The annual subscription for membership of the Fellowship of Medicine and Post-Graduate Medical Association has been fixed at a minimum of 10s., which includes the subscription to the *Post-Graduate Medical Journal*.

The Fellowship arranges, during the autumn and winter sessions, a series of lectures. Special clinical demonstrations in medicine and in surgery are arranged also weekly from October onwards. Syllabuses will be sent regularly on application.

National Post-Graduate School of Radiotherapy.

It was announced in our issue of June 28th (p. 1185) that a working scheme had recently been drafted for affiliation between the London Radium Institute in Ridinghouse Street, and the Mount Vernon Hospital at Northwood, for the establishment, under joint control, of a National Post-Graduate School of Radiotherapy. The first of a series of intensive courses in radiotherapy will commence on Monday, October 6th. Applications for copies of the syllabus and other information may be addressed to the Dean (Sir Cuthbert Wallace, K.C.M.G., F.R.C.S.) at the National Post-Graduate School of Radiotherapy (the Mount Vernon Hospital and Radium Institute), Ridinghouse Street, London, W.1.

West London Post-Graduate College.

The work of this institution is carried on at the West London Hospital, the first in London to devote its clinical material solely to the instruction of qualified medical men. The college started in 1895; it is provided with lecture, reading, writing, and class rooms, and accommodation of all sorts for the convenience of post-graduate students. The work of the college is eminently suitable for men in general practice and officers in the services who wish to revive their general clinical knowledge.

As for ward work, the students accompany the senior staff on their visits to the wards at 2.30 p.m. daily, and also go round with the resident medical officers in the morning. Out-patient work begins at 2 p.m. This department is large, and affords ample facilities for post-graduates to see and examine patients. There are the usual special departments. Post-graduates are appointed to act as clinical assistants for three or six months, no charge being made. Special practical classes are held in medicine, general practical surgery, gastro-intestinal surgery, medical and surgical diseases of children, analysis of blood and urine, cystoscopy, venereal diseases, tropical diseases,

retinoscopy, ophthalmic operative surgery, and, when material is available, in operative surgery. The size of the classes is limited. A special clinic for the treatment of venereal diseases (male and female) is held all day. Graduates are admitted to the work of the clinic free, and certificates of satisfactory attendance and work are given.

Operations take place at 2 p.m. daily, the surgeons often availing themselves of the assistance of the graduates, and in any case making arrangements so that they can readily see what is going on. The anaesthetists give instruction in the administration of anaesthetics, including spinal analgesia, on the operating days, students being allowed to administer them under supervision, while special classes are held in each session. The pathological laboratory is in charge of a pathologist, who attends every day.

Demonstrations are ordinarily given in the morning by the assistant physicians and surgeons, and by the medical and surgical registrars.

Fees.—Hospital practice, including all ordinary demonstrations and lectures, £1 1s. for one week, £4 4s. for one month, £7 7s. for two months, £9 9s. for three months, £15 15s. for six months, £23 12s. 6d. for one year, and £45 for a life ticket. Instruction in the administration of anaesthetics is given at the rate of £3 3s. a month.

The certificates of the school are recognized by the Admiralty, the War Office, the Colonial Office, the India Office, and the University of London (for higher degrees). A prospectus can be obtained on application to the Dean.

North-East London Post-Graduate College.

The headquarters of this post-graduate school are situated at the Prince of Wales's General Hospital, Tottenham, N.15, in the midst of this densely populated North London district. It contains 200 beds, and is within a few minutes' walk of South Tottenham Station on the London Midland and Scottish Railway, and Seven Sisters and Tottenham Hale Stations on the London and North-Eastern Railway. It is readily accessible by electric tram from Finsbury Park and Hackney, and from Dalston, Edmonton, and other parts of North London. The North Middlesex Hospital, Edmonton, N.18, with upwards of 1,000 beds, has, under a recent arrangement, taken part in the clinical teaching.

The college is in association with the Fellowship of Medicine and Post-Graduate Medical Association, and is recognized by the Admiralty and India Office for the purpose of study leave, and by the University of London as a place for advanced study for the M.D. and M.S. degrees; the course of practical teaching of bacteriology is approved by the University of Cambridge for its Diploma in Public Health, and there are ample arrangements for the convenience of men who are thus working, or who, being in active practice, are desirous of getting themselves into touch with modern methods. The hospital as a whole affords excellent facilities for qualified medical practitioners who wish to take part for a time in active general hospital work, or to obtain special instruction in the several branches of medicine and surgery, since it is open to them to study diseases of the eye, ear, throat, nose, skin, fevers, children's diseases, psychological medicine, dental surgery, radiography, the application of electricity in disease, and the administration of anaesthetics. Throughout the sessions, into which the year's work is divided, clinics, lectures, and demonstrations are given by members of the teaching staff. Operations are performed every afternoon of the week except Saturday. Special vacation or intensive courses are held at intervals throughout the year, each lasting two weeks, clinical instruction being arranged for each hour of each day.

Fees.—For the hospital practice in general medicine or surgery the fee is 5 guineas for three months or 2 guineas for one month. Provided there is accommodation in the special departments, the fees are: eye department 3 guineas; gynaecological department 6 guineas; ear, nose, and throat department 5 guineas for three months. All departments—the fee is 3 guineas for one month, 6 guineas for three months, 10 guineas for a year, and 15 guineas for a perpetual ticket.

The winter session will be opened about the middle of September as regards clinical teaching.

Additional information can be obtained from the Dean of the Post-Graduate College, at the Prince of Wales's Hospital.

Manchester Post-Graduate Courses.

The Faculty of Medicine of the University of Manchester has arranged courses in preparation for the diplomas in psychological medicine, in public health, bacteriology, and veterinary State medicine. There are classes also for certificates in factory and school hygiene and in venereal diseases. The Faculty of Medicine has also instituted courses to meet the requirements of graduates desiring to refresh their knowledge or to pursue further their studies in various special branches. The arrangements are in the hands of a committee consisting of certain members of the faculty, of representatives of hospitals, and of the medical officer of health for Manchester. Full particulars can be obtained from the Dean of the Medical School, the University, Manchester. Part-time courses will be given during 1930–31 in diseases of the eye, diseases of the skin, practical instruction in local anaesthesia and minor operative surgery, and in bacteriology and immunity. A limited number of clinical assistantships are offered in the medical, surgical, and special departments of the Manchester Royal Infirmary, the Ancoats Hospital, and certain special hospitals for one, two, or three months, or longer. A clinical assistantship at the Radium Institute for three months is also offered. Clinical teaching for post-graduates is given each Thursday during university terms by the honorary staff at Ancoats Hospital; no fee charged.

Post-Graduate Courses at Bristol.

The University of Bristol provides courses of post-graduate study for practitioners. Details of set courses at the Royal Infirmary and General Hospital are announced locally. In addition, practitioners may become clinical assistants in medicine, surgery, or special subjects for periods of a month or more.

Daily Post-Graduate Study.—For those who are able to devote several hours each day to hospital practice the university offers special facilities for post-graduate work. Qualified medical practitioners may be appointed as clinical assistants for a period of one or more months. They may act as assistants, if times permit, in more than one department and in any of the hospitals during their period of study. They will be entitled to the use of the clinical laboratories and medical library, and have the right to attend in all departments, including operations, post-graduate and ordinary clinical demonstrations, and post-mortem examinations.

All inquiries and applications for admission should be addressed to the Director of Post-Graduate Studies (Clinical Section), Pathological Department, University of Bristol, who can be seen on any day by appointment at the Pathological Department.

Post-Graduate Courses at Newcastle.

For the year 1930–31 the following post-graduate courses have been arranged by the College of Medicine, Newcastle-on-Tyne (University of Durham):

1. General courses in clinical medicine, surgery, and pathology at the Royal Victoria Infirmary, meeting once weekly for ten weeks. One course will be held from October to December, and one from April to June.

2. Special courses of clinical instruction meeting once weekly for ten weeks in the following subjects: gynaecology, diseases of the eye, diseases of the throat, nose, and ear, diseases of the skin, venereal diseases, neurology. Special courses in midwifery will be held at the Princess Mary Maternity Hospital.

3. An intensive course of fourteen days' duration in the summer vacation, 1931.

4. In addition to the regular post-graduate courses practitioners may attend the ordinary medical and surgical practice of the Royal Victoria Infirmary, and also at the Princess Mary Maternity Hospital, for specified periods.

Edinburgh Post-Graduate Courses.

In connexion with the University and Royal Colleges post-graduate courses are arranged every year, from about the middle of July to about the middle of September, comprising: (*a*) a course in obstetrics, gynaecology, and diseases of children, held from July 14th to August 9th; (*b*) a general practitioners' course; (*c*) a general surgical

course. Courses (*b*) and (*c*) extended for four weeks from August 11th to September 6th. Similar courses are held each year.

The course in obstetrics, gynaecology, and diseases of children comprises instruction in clinical midwifery and clinical gynaecology, obstetrics and gynaecological pathology, diseases of children, child welfare, and ante-natal clinics, etc.

The general practitioners' course includes lecture-demonstrations, and, where possible, practical instruction on medical anatomy, medical sideroom work, examination of the blood, *x*-ray and electrical therapy, morbid anatomy, and post-mortem examination; clinical instruction in medicine, surgery, gynaecology, diseases of children, diseases of the skin, and infectious diseases; and special instruction in the diseases and methods of examination of the nervous, circulatory, respiratory, alimentary, and renal systems, and in diseases of the ductless glands. The general surgical course includes lecture-demonstrations on surgical anatomy, surgical pathology, and surgical *x*-ray diagnosis; clinical instruction in surgery at the Royal Infirmary and Royal Hospital for Sick Children; clinical instruction in venereal diseases; surgical out-patients, surgical and gynaecological operations, and special instruction in abdominal and genito-urinary and other branches of surgery.

A series of special lectures, open to all graduates, is delivered on subjects of general medical and surgical interest, including recent advances in treatment. Among the special courses also arranged are: examination of the blood, vaccine therapy, medical chemistry, diseases of the ear, nose, and throat, pathology of the nervous system, ophthalmoscopy, venereal diseases, and *x*-ray physics and electrotechnics.

Particulars regarding the courses, dates of commencing, fees, etc., may be had on application to the Honorary Secretary, Post-Graduate Courses in Medicine, University New Buildings, Edinburgh.

Post-Graduate Medical Teaching in Glasgow.

Organized post-graduate medical teaching is available in Glasgow under the auspices of the Post-Graduate Medical Association. This association represents practically all the teaching institutions in Glasgow and the various teachers giving post-graduate instruction, and its business is managed by a board elected periodically by them. The chairman of the board is Professor Robert Muir. During the winter months special courses in various subjects are conducted, and from November till May there is a series of weekly demonstrations specially designed for local practitioners. Clinical courses are carried out during the summer months, and arrangements have also been made whereby a limited number of graduates may become attached to wards or out-patient departments nominally as clinical assistants for definite periods throughout the year. As such they work under the direct supervision of the physician or surgeon in charge, and carry out such detailed investigations as directed.

A general medical and surgical course is held each year during the last two weeks of August and the first two weeks of September, which is arranged to include most of the subjects of interest to the general practitioner. This year the course is being conducted from August 18th to September 12th. The forenoons are occupied with general medicine and surgical diagnosis and minor surgery, in the Western Infirmary and in the Royal Infirmary. In the afternoons special subjects are dealt with in the special hospitals and in the special departments of the general hospitals, two subjects being considered most afternoons.

Further information may be had on application to Dr. James Carslaw, Secretary, Post-Graduate Medical Association, 9, Woodside Terrace, Glasgow, C.3.

Australian and New Zealand Medical Association.

The Australian and New Zealand Medical Association gives information and advice to medical visitors from the Commonwealth and Dominions with regard especially to attendance at special clinics, post-graduate work, and facilities for preparing for examinations such as the M.R.C.P., F.R.C.S., etc., and also as to house appointments and clinical assistantships in London and the provinces. Information will also be given about lodgings, sports, and social opportunities. Two dinners are held annually. All medical graduates or undergraduates born in Australia or New Zealand and resident in or visiting England are eligible to become members. The fee is one payment of 5s. Further information can be obtained from the joint honorary secretaries, Mr. E. T. C. Milligan, F.R.C.S., 86, Harley Street, W., and Mr. Philip J. Jory, F.R.C.S., 26, Queen Anne Street, W.

TROPICAL MEDICINE.

There are large and important Schools of Tropical Medicine in London and Liverpool, and the Colonial Office expects all nominees for the Colonial Medical Service to pass through one or other of the two schools mentioned before their appointments are confirmed, and commercial firms engaged in tropical enterprise commonly demand from medical applicants for employment corresponding evidence of special knowledge. Information with regard to these schools and diplomas and degrees is given in the paragraphs printed below. Further particulars will be found in the *Guide to Regulations, Courses, and Qualifications in Public Health and Tropical Medicine and Hygiene*, compiled by Sir Andrew Balfour, Director of the London School of Hygiene and Tropical Medicine, and published by the British Medical Association (price 3s.). This useful handbook contains, among other matter, a list of the teaching centres and examining bodies, with the qualifications obtainable from them. The University of London alone gives a degree (M.D.) in Tropical Medicine, and this, being an "internal degree," can only be taken by students who are medical graduates of that university. Diplomas in Tropical Medicine or Hygiene are granted by the universities of Cambridge, Edinburgh, and Liverpool, and by the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England.

Diplomas and Degrees.

London University.—Tropical medicine is one of the six branches in which the M.D. degree may be obtained. The regulations relating to the curriculum and examination correspond to those applying to the other branches.

The Examining Board in England.—This body grants a diploma in tropical medicine and hygiene to candidates after an examination held in the months of February and July. Candidates must present evidence of having attended, subsequently to obtaining a registrable qualification in medicine, surgery, and midwifery, (1) practical instruction in pathology, protozoology, helminthology, entomology, bacteriology, and hygiene in relation to tropical medicine, in an institution recognized for this purpose, during not less than five months; (2) the clinical practice of a hospital recognized for the study of tropical diseases during not less than five months. These conditions may be modified in the case of candidates who have had practical experience in tropical countries. The fee for admission to the examination is £9 9s. The Board also grants diplomas in public health, in psychological medicine, in ophthalmic medicine and surgery, in laryngology and otology, and in gynaecology and obstetrics. Candidates must hold a medical qualification registrable in the United Kingdom, or be graduates in medicine of a recognized Indian, Colonial, or foreign university. Particulars and conditions of admission to these examinations, fees, etc., may be obtained from the Secretary of the Examining Board, Examination Hall, Queen Square, London, W.C.1.

University of Liverpool.—A diploma in tropical medicine is given by this university to students who have attended the courses provided by the Liverpool School of Tropical Medicine and have passed the examination held twice yearly by the university examiners. The subjects of

examination are (*a*) parasitology and tropical pathology; (*b*) entomology; (*c*) tropical medicine, including etiology, symptoms, diagnosis, and treatment of tropical diseases. Fee for the course, £21. A diploma in tropical hygiene (D.T.H.), open to the holders of the D.T.M., has recently been established. The subjects of examination are tropical hygiene (including sanitary engineering, vital statistics and epidemiology, and applied parasitology and entomology); practical sanitation, bacteriology, chemistry (including meteorology and climatology). Fee for the course, £12 16s. Further information can be obtained from the Dean of the Faculty of Medicine, University of Liverpool.

UNIVERSITY OF CAMBRIDGE.—This university grants a diploma in tropical medicine and hygiene to any person whose name has been on the *Medical Register* for not less than a year, provided that he passes the examinations of the university in this subject. Candidates for Part I are examined in the same subjects as candidates for Part I for the diploma in public health. Before admission to Part II, the subjects for which are medicine, surgery, and hygiene in their relation to tropical diseases, candidates must have passed Part I. An examination for Part I is held in April and for Part II in July. The fee for each part of the examination is 10 guineas. Application for further information should be made to Mr. J. E. Purvis, Public Health Chemical Laboratory, Medical School, Cambridge.

UNIVERSITY OF EDINBURGH.—Candidates for the diploma in tropical medicine and hygiene granted by the University of Edinburgh must be graduates in medicine and surgery of that university, or hold corresponding registrable degrees or qualifications of some other licensing body. The course of instruction extends over two terms, and may be taken either from October to March or from April to June and January to March. The examinations are written, oral, and practical, and are held at the end of the courses. Candidates are required on the first occasion of presenting themselves for examination to appear for all the subjects. Those who fail to pass the entire examination within a period of twelve months after first appearance are required to reappear for all the subjects. The university is included in the list of institutions whose courses of instruction in tropical medicine may be taken by officers on appointment to the Colonial Medical Services or during study leave. Full particulars can be obtained from the Dean of the Faculty of Medicine, Edinburgh.

SCHOOLS.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UNIVERSITY OF LONDON).

The courses of study in all branches of the work of the school will commence in the autumn in the new premises in Keppel Street (Gower Street), the gift of the Rockefeller Foundation, which has excellent laboratories and research rooms, a fine lecture theatre and class rooms, library, and museum,

In tropical medicine and hygiene there are two courses in the year, each lasting twenty-two weeks, inclusive of examinations. The dates for the commencement of the next courses are September 30th, 1930, and February 2nd, 1931. The course covers the work required for the D.T.M. and H. (England) and part of that required for the M.D. in tropical medicine of the University of London.

The course of study for the diploma in public health will commence on September 29th, and will extend over a period of twelve calendar months. It is arranged in compliance with the requirements of the General Medical Council, and students taking the course will be able, should they so desire, to proceed to the new academic diploma in public health of London University. The curriculum has been planned on very practical lines, and includes, in addition to work with medical officers of health in two selected areas, a large number of visits to places of public health interest. A series of 5 o'clock lectures will be given by eminent authorities on special subjects, and these lectures will be open to members of the medical profession as well as to students of the school. The London County Council, the City of London, and various other bodies have placed their resources at the disposal of the school for teaching purposes.

The special course of study for the diploma in bacteriology covers a period of one academic year beginning in October, and special three-monthly courses commencing about September 29th will be given in epidemiology and vital statistics.

The Lalcaca Medal (1913)—the gift of a committee appointed to perpetuate the memory of the late Dr. Cowas Lalcaca—is awarded every two years to a student of the school for the best essay on clinical medicine and surgery in the Tropics. The competition is open to any student who has obtained the school certificate. The next award will be made in the autumn of 1931.

THE UNIVERSITY OF EDINBURGH.

A course of instruction for the diploma comprising a primary and a second course is given during the autumn and spring terms (October to March), and includes tropical hygiene, bacteriology, entomology, and parasitology, diseases of tropical climates (systematic and clinical), tuberculosis, and venereal diseases. The primary course alone is also given during the summer term, April to June. The university is included in the list of institutions whose courses of instruction in tropical medicine may be taken by officers on appointment to the Colonial Medical Services or during study leave. Full particulars can be obtained from the Dean of the Faculty of Medicine.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

This school is affiliated with the University of Liverpool. The university now grants diplomas in tropical medicine (D.T.M.) and in tropical hygiene (D.T.H.).

Two full courses of instruction, each lasting about eleven weeks, are given every year for the D.T.M., commencing respectively September 30th (autumn term) and January 6th (Lent term); and two courses for the D.T.H., beginning on January 13th and April 23rd (summer term). The D.T.H. can only be taken by those who have obtained the D.T.M. Students who do not desire to take the diploma examinations held by the university at the end of each term are given a certificate if attendance has been satisfactory.

Fees.—(1) For the D.T.M. course, 20 guineas; for the D.T.H. course, 10 guineas. (2) For the diploma examinations, 5 guineas. An extra charge of one guinea is made for the use of a microscope if required.

The laboratories of the school adjoin the university and the tropical ward of the Royal Infirmary. The dimensions of the building are 162 feet in maximum length by 84 feet in width. In addition to the basement, in which are accommodated the photographic department and large storage rooms, there are four floors. The ground floor has: (1) lecture theatre, with accommodation for about seventy students; (2) library; (3) a spacious museum with preparation room adjoining. The first floor has twelve rooms, in which are housed the departments of tropical medicine and entomology. The second floor has the main class laboratory, 69 feet by 58 feet, excellently lighted; and three other rooms, devoted to the department of parasitology. The third floor has a large research laboratory and two research rooms. On the roof is an insectorium, a mosquito-proof house, and other accommodation.

Since its foundation the school has dispatched to the Tropics thirty-two scientific expeditions, many of the workers having been taken from among its students. The work done by the staff has been published in twenty-one special memoirs—in the *Annals of Tropical Medicine and Parasitology*, issued by the school, and in numerous articles in the scientific press.

The school has also two laboratories in the Tropics: the Manáos Research Laboratory in Brazil; and the Sir Alfred Lewis Jones Tropical Laboratory in Sierra Leone, which was opened on January 10th, 1922, and is staffed by the school. Further information may be obtained from the Honorary Dean, School of Tropical Medicine, Pembroke Place, Liverpool.

PSYCHOLOGICAL MEDICINE.

It cannot be impressed too strongly upon the medical student that a knowledge of mental disorder is just as essential as a knowledge of the other forms of disease which he will be called upon to treat in the routine of general practice. It must be understood that by the term "mental disorder" is not only meant those severe forms which are to be found in mental hospitals, but the term also includes mental defectives of all grades; nervous, difficult, and backward children; the mild and often unrecognized psychoses; and also the various types of psychoneurosis. Such disorders provide the general practitioner with a large proportion of his most difficult cases, and he will find a good knowledge of mental disorder invaluable in his work. Apart from general practice, the student who proposes to take up a career in the prison service or, still more importantly, the school medical service, will find a knowledge of psychological medicine an almost essential part of his equipment.

INSTRUCTION.

Though at the present time the instruction given to the student is far from adequate to supply the knowledge of mental disorder requisite for the needs of the general practitioner, the facilities for the study of psychological medicine in the general hospitals are now much greater than in former years. Thus many of the teaching hospitals have out-patient departments for the treatment of mental cases, and in some of these hospitals special lectures are given in psychopathology. These facilities need not be utilized by the student, however, and the compulsory part of the curriculum is generally confined to formal lectures and a few attendances at some mental hospital. Here the student is apt to see mainly the advanced states of mental disease, and is likely to gain the impression that mental disorder is necessarily related to segregation and custody. We would therefore impress upon him the importance of attending the out-patient department for mental disorders, where he will be able to observe the mild and early cases such as he will hereafter meet with in general practice.

At the Middlesex Hospital a small number of mental cases are treated in the hospital as in-patients. This is an important move from the teaching point of view, because the student will gain true insight into the relation between mental disorder and medicine as a whole, and he will realize that it is a form of illness to be studied with other diseases and to be treated along similar lines.

In London post-graduate courses of instruction of a comprehensive kind are given at the Maudsley Hospital and at Bethlem Hospital; and at the National Hospital, Queen Square, courses are arranged to meet the requirements for the diploma in psychological medicine in regard to nervous diseases. Courses in mental deficiency are arranged by the University of London. There are also post-graduate courses at the various universities which grant diplomas of psychological medicine or of psychiatry.

DIPLOMAS.

Those who are taking up psychiatry as a career will find it desirable to obtain a diploma in psychological medicine. Such a diploma is not at present compulsory for a permanent position on the staff of all mental hospitals, but it will probably become so in course of time, just as it is now essential to obtain the D.P.H. if a career in public health is contemplated. Psychiatry is one of the branches of medicine which candidates for the M.D. degree of the Universities of London and Edinburgh can take up, and, in addition, diplomas in psychological medicine (D.P.M.), to which reference has been made, can be obtained from the Universities of London, Edinburgh, Durham, Leeds, Manchester, Dublin, and the National University of Ireland, and from the Conjoint Board in England. The requirements for a diploma differ to some extent in the various universities and colleges.

University of London (D.P.M.).

The diploma awarded by the University of London certifies that the candidate has passed the examination in psychological medicine with special knowledge of one or other of the two branches, either psychiatry or mental deficiency, special provision being made for this in Part B of the examination. The examination is held twice in each year: Part A in March and October, and Part B in April and November. Part A consists of anatomy, histology, and physiology of the nervous system (one paper and a practical examination), and psychology (one paper and an oral examination). Part B consists of neurology (paper, and clinical and oral examinations), and psychological medicine (two papers and clinical and oral examinations). Paper I tests the candidate's general knowledge of both mental diseases and mental deficiency, and Paper II is a special one consisting of two alternative sections, one relating to mental diseases and the other to mental deficiency. A copy of the Regulations and of the Syllabus of Study will be sent on application to John Lea, M.A., University Extension Registrar, University of London, South Kensington, S.W.7.

Conjoint Board of England (D.P.M., R.C.P.and S.Eng.).

Both parts of the examination are held in June and December. The examination comprises the following subjects, with special regard to their relationship to psychological and general medicine:—Part I: (*a*) anatomy and physiology of the nervous system; (*b*) psychology. Part II: (*a*) neurology (including clinical and pathological neurology; (*b*) psychological medicine, including its legal relationships. The examination will be written and oral in Part I, and written, oral, and clinical in Part II. No special certificates of study are required for Part I, but before entering for Part II candidates must produce certificates of: (*a*) having attended clinical instruction for at least two months at a recognized hospital for nervous diseases, or in the department for nervous diseases of a recognized general hospital; (*b*) having held a resident or whole-time appointment at an institution for mental diseases where clinical instruction is given, recognized for the purpose, for a period of six months, or having attended clinical instruction in psychological medicine at a recognized institution during twelve months. Further particulars may be obtained from the Secretary, Examination Hall, 8-11, Queen Square, London, W.C.1.

University of Edinburgh (Dipl. Psych.).

Candidates for the diploma must have held subsequent to graduation: (*a*) a resident appointment for one year in a hospital for mental disorders approved by the Faculty; or (*b*) a six months' appointment as above, and six months' practical study of nervous diseases in a special or general hospital approved by the Faculty. The examination comprises:—Part I: (1) anatomy of the nervous system; (2) physiology of the nervous system; (3) psychology and experimental psychology. Part II: (1) neuropathology; (2) clinical psychiatry; (3) clinical neurology; (4) an additional subject selected by the candidate from a prescribed list. Further particulars may be obtained from the Dean of the Faculty of Medicine, the University of Edinburgh.

University of Leeds (D.P.M.).

The examination is in three parts, and is written, oral, and practical. Subjects of examination:—Part I: (1) the development, anatomy, and histology (human and comparative) of the nervous system; (2) the physiology of the nervous system, and of the organs of special sense; (3) general psychology. Part II: (4) the pathology of the nervous system. Part III: (5) clinical psychiatry; (6) experimental and morbid psychology; (7) (*a*) clinical neurology; (*b*) mental hospital administration, (*c*) medico-legal aspects of insanity. Candidates, in order to pass, must satisfy the examiners in the practical and clinical parts of the examination in Parts II and III respectively. They may present themselves for the three parts of the examination separately, or at the same time, provided that no candidate shall be allowed to pass in Part II unless he has already passed in Part I, or in Part III unless he has already passed in Parts I and II. Evidence must be produced by candidates as to attendance of approved courses of instruction before they submit themselves to Part I of the examination. Particulars may be obtained from the Academic Sub-Dean, School of Medicine, Leeds.

University of Manchester (D.P.M.).

The examination is in two parts. Before presenting themselves for either part of the examination candidates must produce evidence of having attended, subsequent to qualification, certain approved courses of instruction, particulars of which may be found in the prospectus of post-graduate courses.

The course of study extends over a period of three university terms, two of which must be taken in the university; the remaining term may be taken at the university, or at some approved institution. The subjects of examination are:—Part I: (1) a written and practical examination on the development, anatomy (human and comparative), and physiology of the nervous system; (2) a written and practical examination in psychology (theoretical and experimental). Part II: (1) a written and practical examination in pathology in relation to the nervous system; (2) a written, clinical, and oral examination in psychological medicine; (3) a clinical and oral examination in clinical neurology. For further information application should be made to the Dean of the Medical School, the University, Manchester.

University of Durham (D.Psy.).

The examination for the Diploma in Psychiatry consists of two parts. Part I: anatomy, physiology, pathology, and bacteriology; Part II: psychology and experimental psychology, neurology and psychiatry (systematic and clinical); and candidates may present themselves for the whole examination or for either part separately. Particulars of the courses of instruction may be had on application to the Dean, College of Medicine, University of Durham, Newcastle-on-Tyne.

University of Dublin Diploma.

A post-graduate diploma in psychological medicine is conferred upon registered medical practitioners who have held a resident medical appointment at a recognized institution for the treatment of mental diseases for twelve months, or who have held such an appointment for six months and have attended clinical instruction at an approved institution for six months. Particulars of special courses of instruction may be obtained from the Registrar of the School of Physic, Trinity College, Dublin.

National University of Ireland Diploma.

The National University of Ireland grants a diploma in mental diseases. Application should be made to the Registrars of the Constituent Colleges, University College, Dublin University College, Cork, and University College, Galway, for all information.

COURSES OF INSTRUCTION.

Maudsley Hospital, London.

A course of instruction for the Diploma in Psychological Medicine is given annually at the Maudsley Hospital, Denmark Hill, from January to May inclusive, the details of the last course being as follows. The course consisted of two parts. In the first part lectures on the anatomy of the nervous system were given by Professor Le Gros Clark, with practical instruction by Mr. C. Geary. A course of lectures on the physiology of the nervous system, with demonstrations in physiological psychology, was given by Dr. F. Golla; a series of lectures and demonstrations on the biochemical aspects of mental disorders, and laboratory methods, by Mr. S. A. Mann; and on theoretical and practical psychology by Dr. Henry Devine. For the second part of the course lectures on morbid psychology and psychiatry were given by Dr. Mapother, on the neuroses by Dr. Bernard Hart, on therapeutics by Dr. Petrie, on general pathology by Dr. Golla and Mr. C. Geary, and on pathological chemistry by Mr. Mann. Dr. Shrubsall lectured on mental deficiency, and Dr. East on criminal insanity. Dr. Golla and Dr. Walshe gave instruction on clinical neurology, and Mr. Foster Moore on eye changes as applied to psychiatry. The fee for the whole course (Part I and Part II) was 15 guineas, or for either part separately 10 guineas; for one single series of lectures in Part I the fee was 4 guineas, and in Part II 2 guineas. Inquiries as to lectures, etc., should be addressed to the Director of the Central Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E.5.

Bethlem Royal Hospital.

The new Bethlem Hospital has recently been opened at Monks Orchard, Eden Park, Beckenham, Kent, where every facility will be available for the clinical study of nervous and mental disorder. The classification of patients will be a prominent feature in the administration of the hospital, and treatment in all its modern and specialized aspects can be carried out at the Lord Wakefield of Hythe Treatment and Research Laboratories. It is proposed to give two courses of lectures and practical instruction for the Diploma in Psychological Medicine each year, in spring and autumn. It is contemplated that the first course will commence in January, 1931. These are of intensive character, commencing in September and completed in early December, and a spring session commencing in the middle of January and completed in the middle of April. Each course consists of two parts: Part A includes lectures and demonstrations on the anatomy, histology, and physiology of the nervous system, with lectures on psychology and demonstrations in experimental psychology. Part B comprises lectures and clinical demonstrations in psychology, including lectures and demonstrations in the morbid anatomy of the nervous system, a series of lectures, with clinical demonstrations, on different branches of psychological medicine, and lectures, with clinical demonstrations, on mental deficiency. Entrants for the course who pay a composition fee of 15 guineas may, if due notice is given, attend either Part A or Part B of one course and postpone the other part until the next session. An entrant who wishes to attend one part only pays a fee of 10 guineas. An entrant who takes the complete course can attend the general clinical practice of the hospital on payment of 5 guineas for six months, or 10 guineas for one year, but an entrant who does not take either part of the course and desires to attend the clinical practice of the hospital must pay a fee of 5 guineas for each three months of attendance. To enable post-graduates to obtain special experience in this branch of medicine clinical assistants are appointed from time to time. Further particulars may be obtained from the Physician-Superintendent, Monks Orchard, Eden Park, Beckenham, Kent.

National Hospital, Queen Square.

Post-graduate courses which fulfil the requirements of the regulations for the Diploma in Psychological Medicine in regard to instruction in nervous diseases are held at the National Hospital, Queen Square, Bloomsbury, W.C.1, thrice annually, usually during February to March, May to June, and October to November. Lectures on the anatomy, physiology, and pathology of the nervous system and various clinical lectures are delivered and demonstrations are given. Out-patient clinics are held at the hospital on the afternoons of Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays. An inclusive fee of 10 guineas is charged for the whole course, but any part of the course can be taken separately at a special fee. A special arrangement is made for those unable to attend the whole course, and for details applications should be made to the Dean of the Medical School. Fees are payable to the secretary of the hospital on entering for the course.

Tavistock Square Clinic for Functional Nervous Disorders.

Courses in the theory and practice of modern psychotherapy are held at this clinic every term. The subjects dealt with include the various schools of analytical psychology, treatment by persuasion and suggestion, differential diagnosis, and physical factors. Syllabus and particulars of dates and fees may be obtained from the Honorary Lecture Secretary at 51, Tavistock Square, London, W.C.1. Clinical assistantships are from time to time available for graduates who have attended such courses. The director of the clinic is Dr. H. Crichton Miller, the deputy director Dr. J. R. Rees, and there is a large children's department. The "short course" lasts for a fortnight, and consists of twenty lectures, ten case-discussions, and two demonstrations. It is intended for senior students and those engaged in post-graduate study. The "long course" lasts for twelve weeks, and consists of two lectures on Wednesday afternoons. It is intended for senior students, and particularly for general practitioners in the London area.

Particulars of the courses of instruction arranged by the other universities granting the diploma may be obtained on application to the addresses given above (see Diplomas).

MENTAL HOSPITAL APPOINTMENTS.

Those who take up psychiatry as a career work as medical officers of public or private mental hospitals or similar institutions. Except in the larger institutions, such as those under the control of the London County Council, where a number of the medical officers are allowed to live out if married, the medical staff are resident officers, having board, lodging, etc., either in the hospital itself or a residence in the grounds. Junior assistant medical officers receive about £300 to £400 per annum, and senior assistant medical officers about £500 to £700, in both cases with board, lodging, laundry, etc., in addition; if married, the board, etc., is commuted for cash. As the mental hospitals are under local control the salaries vary much in different asylums. Medical superintendents, whose pay

commonly ranges between £800 and £1,500 per annum, are provided with a house in the grounds of the hospital, and draw various allowances.

Since the passing of the Asylum Officers Superannuation Act of 1909, all officers and others of the established staff of a public (county or borough asylum) mental hospital may retire at the age of 55 on a pension varying from one-half to two-thirds of the value of their pay and emoluments, or one-fiftieth for every year served, paying as contribution 3 per cent. of the value of their appointments annually. This very favourable prospect may not appeal to junior practitioners joining the services, but will eventually prove to be a valuable asset.

Prospects in the Public Service.

Appointments to the public mental hospitals are made by the visiting committees, and in most cases only the junior posts are open to those who have not had previous experience in psychiatry. Since the public mental hospital service is a local and, except indirectly, not an imperial one, the promotion tends to be slow and uncertain; and the higher positions are not always advertised and thus thrown open to competition. For this and other reasons mental hospital work has undoubtedly not been in favour with newly qualified men in years past, but the general conditions of service continue to show a progressive improvement.

Both the British Medical Association and the Royal Medico-Psychological Association are working separately and together to improve present conditions of service, and have, for example, already removed the "celibacy" objection to the service. The salaries have also been considerably increased, especially in the junior ranks. During the last few years considerable progress has been made in the conditions under which the insane are treated. The mental hospitals are developing an atmosphere approximating more closely to that of the general hospitals. As a result of these developments the mental hospital service is becoming more attractive, and now affords greater opportunities for the medical graduate who proposes to specialize in psychiatry.

While routine, administrative, and clerical work bulk largely in mental hospital duties, as they do in other public medical services, there is ample material, time, and scope for purely medical work and research—difficult as the subject may be—in psychiatry as one of the branches of medicine open to young graduates. Most mental hospitals are now equipped with efficient clinical laboratories; moreover, those who wish to undertake research are afforded every opportunity of doing so in the pathological department of the Maudsley Hospital and also in various other centres in England and Scotland.

THE PUBLIC HEALTH MEDICAL SERVICES.

The central authority to secure the adoption and effective administration of measures conducive to the health of the people, and to promote research work and the proper training of persons for health services, is the Ministry of Health.

For the purpose of local public health administration the whole of England and Wales is divided into counties, county boroughs, boroughs, and urban and rural sanitary districts. The administrative County of London, exclusive of the City of London, is divided into twenty-eight metropolitan boroughs.

The public health medical services for Great Britain embrace between three and four thousand medical men and women who give whole-time services, and, in addition, a large number who give part-time services. The medical officers appointed for these services may be either medical officers of the Ministry of Health for England and of the corresponding Boards of Health for Scotland and Wales; or —and these form the large majority—they may be medical officers appointed by the many local public health authorities. These latter appointments include: medical officers of health, tuberculosis medical officers, maternity and child welfare medical officers, venereal diseases medical officers, and school medical officers—who must be regarded as working in the health interests of the school child. By the larger public health authorities assistant medical officers are also appointed, and these posts often serve as stepping-stones to the higher offices as vacancies, which are required to be advertised, occur.

The Medical Services of the Central Authority.

For England, the medical work of the Ministry of Health has been organized under the control of a Chief Medical Officer. It is subdivided into eight sections, with a senior medical officer at the head of each, and about a hundred medical officers, of whom about half are regional and deputy regional medical officers employed for certain duties under the Health Insurance Acts. Briefly, the sections deal with environmental hygiene, epidemiology, and international health; maternity and child welfare; tuberculosis and venereal diseases; the supervision of the food supplies; sanitary administration in relation to infectious diseases; national health insurance; and the school medical service. Vacancies in the staff are advertised from time to time in the medical journals, and appointments are made by the Minister on the recommendations of a Selection Committee. These are Civil Service appointments, subject to the usual conditions as to pension, holidays, etc. Medical officers are also employed by the Welsh Board of Health (Cardiff) and the Department of Health for Scotland (Edinburgh).

Medical Officers of Health.

The duties of the medical officer of health are to inform himself upon all influences affecting, or threatening to affect, injuriously the public health within his district; to advise his sanitary authority upon all matters relating to health; and to perform all the duties imposed upon him by statutes, by-laws, and regulations. He must prepare and submit to his local authority special and annual reports; give immediate information to the Ministry of Health of any serious outbreak of disease; and, subject to the instruction of his sanitary authority, he shall direct or superintend the work of sanitary inspection.

By the Sanitary Officers Order, 1926, no person is qualified to be hereafter appointed or reappointed as a medical officer of health of any district or combination of districts unless, in addition to the qualifications prescribed by any statute, he is also either registered in the *Medical Register* as the holder of a Diploma in Public Health, Sanitary Science, or State Medicine, or has had not less than three years' previous experience of the duties of a medical officer of health.

The Public Health (Officers) Act, 1921, which was promoted by the British Medical Association, provides that a whole-time medical officer of health of a county borough or urban and rural district in England and Wales, a part of whose salary is contributed by the Exchequer, shall not be appointed for a limited period, and shall not be removed from his office except by or with the consent of the Minister of Health. A similar security of tenure also applies to all medical officers of health of county councils and of London boroughs.

Under the Sanitary Officers Order, 1926, a medical officer of health who does *not* devote his whole time to the duties of his office, but a portion of whose salary is obtained from Exchequer grant, may be appointed without limit of time; in which case he cannot be removed from office without the consent of the Minister. If he is appointed for a specified term, say one year, he continues to hold office from year to year unless the Minister consents to his removal. Where the electing body pays the whole of the salary of such a medical officer of health he may be dismissed from office without reference to the Minister of Health.

A considerable number of authorities have now adopted the Local Government and Other Officers Superannuation Act, 1922. Under this Act if an officer is incapacitated by

ill health after ten years of service, or if he has reached 65 years of age, he is entitled to superannuation on the following scale: after ten years' service, 10/60 of the average salary which he received during the last five years of employment; after eleven years, 11/60, and so on up to a maximum of 40/60 after forty years or more of service. This Act, however, remains permissive, and it fails to make due allowance, in computing service for purposes of superannuation, for the more advanced age, as compared with other officials, at which the medical officer of health can enter the public service. In these two respects the position reached falls short of that for which the British Medical Association has been working for some years.

In Scotland the position is different in some respects. The central authority is the Board of Health, with a staff of medical officers for health insurance work. Under the Public Health (Scotland) Act, 1897, no one can be appointed as medical officer of health for any area unless he possesses the Diploma in Public Health. No medical officer can be removed from office except with the sanction of the Board of Health. A " proper " salary must be paid, and the local authority may not bring about the resignation of the officer by indirect means, such as reducing the salary or attaching new conditions to the appointment. The Act says nothing about superannuation or the age of retirement.

School Medical Officers.

School medical officers are appointed by local education authorities. Primarily their duty is to detect among the children attending the public elementary schools any physical or mental defect which may retard education, and to inform their parents of its existence. Most approved schemes of medical inspection include arrangements which facilitate the task of parents in obtaining for their children the necessary treatment, check the results of this treatment, and keep each defective child under skilled observation both at home and at school until it has passed altogether out of the education authorities' hands. Indeed, it is now the practice for the education authorities themselves to provide for certain ameliorative work, notably the prescription of glasses where necessary, dental treatment, the removal of adenoids and tonsils, and treatment in connexion with certain diseases of the skin and some physical and mental defects. The general effect of all schemes alike is to make the inspection imposed by law of benefit, not merely to the individual child, but to the community at large, by preventing the development of conditions which lead to the existence of a large proportion of inefficient citizens among the adult population. The work is so related to that of medical officers of health that, generally, the senior school medical officer fills both appointments, his work, when necessary, being supplemented by that of whole- or part-time assistants. A diploma in public health is almost always required of those entering the school medical service.

In Scotland, while the statutory authority for the work of the school medical service is different, the scheme of work is broadly the same.

Tuberculosis Medical Officers.

A tuberculosis medical officer is a whole-time officer with special training and experience in tuberculosis work, and of a suitable age and attainments to command general confidence. In England such officers are appointed by county councils and county borough councils, and their duties are to carry out the work of diagnosis of tuberculosis, to advise as to treatment, and to take charge of the work of tuberculosis dispensaries and sanatoriums where these are in operation. The work under tuberculosis schemes is co-ordinated with the general public health work of local authorities, and so the medical officer of health is often appointed as the chief tuberculosis officer when a special tuberculosis officer is on the staff of the local authority. The arrangements in Scotland are very similar. In Wales tuberculosis work is carried out under the aegis of the Welsh National Memorial Association, upon which the constituent local authorities are represented, and the appointments of tuberculosis officers are vested in the Association.

Maternity and Child Welfare Medical Officers.

Any public health local authority, however small, may make arrangements for maternity and child welfare work within its area, although very generally the smaller local authorities are provided for in county council schemes. For the schemes of the smaller local authorities the services of a part-time medical officer are obtained when the medical officer of health does not himself undertake the duties; but for the larger schemes special whole-time appointments are made. The maternity and child welfare medical officer is responsible for the work at the centres provided and for directing the home visitations; and these activities are closely co-ordinated with the other branches of public health work directed by the medical officer of health.

Much of this work was commenced in different parts of the country by voluntary organizations; some of it still remains in their hands, and is only loosely linked up with the public health local authority; but the tendency is for the whole of it to be undertaken by the local authorities. A large number of women medical officers have been appointed to these posts.

Venereal Diseases Officers.

Schemes for the diagnosis and treatment of venereal diseases are provided and administered by county councils and county borough councils. In some cases the officer is on the whole-time public health staff, and in others he is a part-time official. Special knowledge and practical experience in the treatment of venereal diseases are essential. The officer appointed for either whole-time or part-time service works at one or more clinics, and also gives instructions and assistance in the treatment of venereal diseases to general practitioners, who are allowed to attend the clinics.

Remuneration in the Public Health Service.

In order to ensure that public health authorities may obtain skilled and highly trained medical officers it is essential that such officers should receive salaries commensurate with their attainments, bearing a reasonable relationship to the time and money expended in fitting them for their important and responsible duties, and comparing well with the income which might be secured in other lines of medical work. With this end in view the British Medical Association and the Society of Medical Officers of Health prepared a scale of minimum commencing salaries for whole-time public health medical officers.

The scale, which was put into operation in 1925, was attended with a large measure of success. There were, however, certain aspects of it which were not entirely satisfactory. For instance, it was not retrospective, and did not, therefore, apply to medical officers who had been appointed prior to the date on which it came into force, and it contained no provision for specified increments in salary.

As the result of a series of conferences between representatives of the various Associations of Local Authorities and the British Medical Association and Society of Medical Officers of Health, under the chairmanship of Lord Askwith, a Memorandum of Recommendations in regard to salaries of public health medical officers has been drawn up and came into force in June of this year. This Memorandum was published in the *Supplement* to the *British Medical Journal* of July 27th, 1929 (p. 71). It has been adopted by the Representative Body and has been accepted by the representatives of the following bodies representing local authorities:

The Association of Municipal Corporations.
The Urban District Councils Association.
The Rural District Councils Association.
The London County Council.
The Association of Education Committees.
The Mental Hospitals Association.
The Metropolitan Boroughs Standing Joint Committee.

Unfortunately, it has not been accepted by the county councils as a whole. A small number of them have accepted it, but the majority for various reasons do not see their way to adopt it. The advertisements of local authorities

who are not prepared to put into effect the whole of the Recommendations will not be published by the *British Medical Journal*, which in this matter will have the co-operation of the *Lancet* and the *Medical Officer*.

The great advantage of the Memorandum is that it embodies a general agreement as to salaries and conditions of service, and is not merely a scale of salaries. It is retrospective, and will therefore benefit officers appointed before it came into force. It provides stated increments for practically all medical officials except whole-time chief medical officers of health, who, as the chief medical officials, may, it is presumed, depend that the commencing salaries mentioned in the agreement will be increased for meritorious work and years of service, and it contains a very valuable provision by which questions of difficulty can be referred to an advisory committee.

For the right class of practitioner with leanings in the direction of public health work the service offers an attractive career, but it must always be remembered that there are comparatively few posts which carry high salaries.

THE REGULATIONS FOR THE DIPLOMA IN PUBLIC HEALTH.

The Examination.

By the most recent Regulations or Rules of the General Medical Council, which came into force on January 1st, 1924, the examination for the D.P.H. is divided into two parts, and no candidate is allowed to sit for the final part of the examination until two years have elapsed since a registrable qualification was obtained. The object of this two years' interval is "to provide opportunity for candidates for the Diploma or Degree in Sanitary Science, Public Health, or State Medicine to pass from the state of pupilage to that of responsible practitioners, to give mature consideration to the obligations and duties involved in the work of the Public Health Service, and to acquire direct experience of medical work in a responsible capacity either in practice or in hospital or laboratory appointments."

The examination is both written and oral, and must include a practical examination in bacteriology and chemistry (Part I), and in infectious diseases, food inspection, inspection of premises, dwellings, factories, workshops, schools, etc. (Part II).

Any candidate who possesses a qualification entitling him to registration on the British, Dominion, or Foreign List of the *Medical Register* can be admitted to examination, provided he has complied with the regulations of a licensing body in the United Kingdom based on the rules of the General Medical Council, and that before being admitted to Part II of the examination his qualification has been registered in the United Kingdom. Only diplomas in public health granted by bodies in the United Kingdom are registrable in the *Medical Register*.

The Curriculum for the Diploma in Public Health.

The curriculum must extend over a period of twelve months, and a candidate is admitted to either part of the examination after he has completed the prescribed courses of instruction in the subjects thereof. At least five months must be given to practical laboratory instruction in an institution approved by the licensing body, in the subjects:

(1) Bacteriology and parasitology, including entomology, especially in relation to diseases of man and to those diseases transmissible to man from the lower animals (180 hours of such instruction is required).
(2) Chemistry and physics in relation to public health (90 hours of such instruction is required).
(3) Meteorology and climatology (10 hours of such instruction is required).

Therefore at least 280 hours of practical instruction, extending over a period of at least five months, is demanded before a candidate is eligible for Part I of the examination.

For a candidate to become eligible for Part II of the examination he must first receive instruction in:

(1) Principles of public health and sanitation (for approximately 30 hours).
(2) Epidemiology and vital statistics (approximately 20 hours).
(3) Sanitary law and administration, including public medical services (approximately 20 hours).
(4) Sanitary construction and planning (approximately 10 hours).
(5) Every candidate must also have made thirty attendances, of not less than two hours in each week of a three-months' period, at the clinical practice of a recognized hospital for infectious diseases; and he must have received instruction in methods of administration.
(6) Every candidate must produce evidence that he has, during a period of not less than six months, been engaged in acquiring a practical knowledge of the duties, routine and special, of public health administration under the supervision of a medical officer of health, who shall certify that the candidate has received, from this officer or other competent medical officer, during not less than three hours on each of sixty working days, practical instruction in these duties, and those relating to:

(*a*) Maternity and child welfare service;
(*b*) Health service for children of school age;
(*c*) Venereal diseases service;
(*d*) Tuberculosis service;
(*e*) Industrial hygiene;
(*f*) Inspection and control of food, including meat and milk.

Certificates of having received the prescribed instruction in public health administration must be given by a medical officer of health who devotes his whole time to public health work; or by the medical officer of health of a sanitary area having a population of not less than 50,000; or in Ireland by the medical superintendent officer of health of a county or county borough having a population of not less than 50,000.

TRAINING AND EXAMINING CENTRES FOR PUBLIC HEALTH QUALIFICATIONS.

Degrees in Sanitary Science are conferred, in England, by the Universities of London, Durham, Liverpool, and Birmingham; in Scotland, by the Universities of Glasgow and Edinburgh; and in Ireland, by the University Colleges of Dublin and Cork. In most cases these degrees are conferred only upon medical graduates of the universities granting them.

Whereas for the Diploma of Public Health the requirements of the General Medical Council are strictly conformed to, these requirements are extended, as a rule, as to both the period and the scope of special studies demanded, before Degrees in Sanitary Science are granted.

Almost all the universities of Great Britain and Ireland grant a D.P.H. and provide for the necessary training. The English and Scottish Conjoint Boards and the Irish Colleges also grant these diplomas.

The post-graduate teaching and training in public health, in London, is provided mainly at one centre—the London School of Hygiene and Tropical Medicine (University of London); the only other training centre which offers such facilities being the Royal Institute of Public Health.

The course of study for the D.P.H., as provided by the London School of Hygiene and Tropical Medicine, covers a period of twelve calendar months, and is so designed that students wishing to do so can proceed to the new academic diploma instituted by the University of London. The School undertakes research work in preventive medicine, and members of the public health services have a common room placed at their disposal, and are privileged to attend staff and special lectures.

The Royal Naval Medical College and the Royal Army Medical College provide courses of training to the medical officers of these two services.

Degrees and Diplomas in Public Health are registrable qualifications, but not so those in Tropical Medicine and Hygiene.

QUALIFICATIONS IN TROPICAL MEDICINE AND HYGIENE.

The University of London grants a degree (M.D. in Tropical Medicine) to its medical graduates, and the course of training required must extend over at least one academic year.

Diplomas in Tropical Medicine and Hygiene are granted, in England, by the Universities of Cambridge and Liverpool, and by the English Conjoint Board; and, in Scotland, by the University of Edinburgh. Among the institutions which provide qualifying courses are the London School of Hygiene and Tropical Medicine, the Liverpool School of Tropical Medicine, and the Royal Army Medical College. In the last-mentioned institution the training provided is restricted to army medical officers. The training period for these diplomas is about six months. Graduates of medicine and surgery of recognized universities whose degrees are not registrable in this country may enter for the examination of the English Conjoint Board, and the

conditions of study may be modified on the grounds of previous work in the Tropics or of original investigations undertaken.

The Colonial Office has decreed recently that the holder of a D.T.M. and H., or of a D.T.H., is eligible for appointment as a medical officer of health in places and districts other than those with large populations. In the latter cases a D.P.H. is required.

Those wishing for the details of syllabus of study, fees, date of commencement of the training courses, and the dates of examinations, etc., of any particular training course or examining body, will find these fully and clearly set out, with notes and comments, in the *Guide to the Regulations, Courses and Examinations for Qualifications in Public Health and Tropical Medicine and Hygiene in Great Britain and Ireland*, which has been prepared by Sir Andrew Balfour, K.C.M.G., and published by the British Medical Association (Tavistock Square, W.C.1). The price is 3s. net.

The University of Manchester has a well-equipped department of bacteriology and preventive medicine, where candidates preparing for the examinations of the various university and examining boards for the Diploma in Public Health can obtain instruction. It also prepares candidates for the Diploma in Bacteriology and in Veterinary State Medicine, granted by the university, and for its Certificates in Factory Hygiene and School Hygiene. Full particulars can be obtained from the Dean of the Medical School, the University, Manchester.

The University of Edinburgh grants a Diploma in Public Health. The course, which extends over a period of twelve calendar months, can be commenced in October only, and provision is made by the university for instruction in all the subjects. Candidates for the diploma must be graduates in medicine and surgery of the University of Edinburgh, or must hold corresponding degrees or registrable medical qualifications, which must be registered before a candidate is admitted to examination. The course for the diploma is divided into two parts, for each of which examinations are held twice annually—in March and July for Part I, and in October and March for Part II. In each part the candidate must pass in all the specified subjects at one examination. Admission to the examinations is contingent upon the candidate having complied with the following conditions:

PART I.—(*a*) Completion, subsequent to obtaining a registrable medical qualification, of the course of instruction prescribed for Part I.

PART II.—(*b*) Completion, subsequent to obtaining a registrable medical qualification, of the course of instruction prescribed for Part II. (*c*) A lapse of two years after obtaining a registrable medical qualification. (*d*) Previous passage of examination in all subjects of Part I.

Further particulars can be obtained from the Dean of the Faculty of Medicine, Edinburgh.

THE SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

A CAREER as a medical officer in the Royal Navy offers very definite attractions. In the large naval hospitals the medical, surgical, and specialist work is of a very high standard. The work is exacting, and it is the aim of the Admiralty to arrange appointments as far as possible so that medical officers have an opportunity of alternating their work not only at home and abroad, but also ashore and afloat.

To give naval surgeons opportunities for professional work has always been a very definite policy of the Admiralty, and within the last year or so this matter has received still further attention. The general and specialist courses have been increased so that, as far as possible, every officer shall have a course of instruction of not less than four months' duration every four years. The number of specialists allowed is now sixty, and the specialist allowance is 5s. a day. The establishment of Surgeon Captains has been increased to twenty, and every recent improvement has been made towards giving increased opportunities of advancement and accelerated promotion to the best men.

Examinations for direct entry into the Medical Service are at present in abeyance. Entries are made by means of the short-service scheme.

General Conditions of the Short-service Scheme.

A candidate must be registered, must be under 30 years of age, and must be recommended by the dean of his school; if, however, the candidate intends to apply for transfer to the permanent list, he must have been under 28 years of age at the time of his entry. He must be a British subject of pure European descent. Unmarried candidates will be preferred. A candidate will be interviewed by the Medical Director-General R.N., and will undergo a physical examination. If considered eligible by the Medical Director-General his name will be submitted to the Board of Admiralty, and he may be appointed "surgeon lieutenant for short service." A candidate must engage for three years, with the option of continuing for a further period of twelve months if his services are still required. The present rate of pay is £1 4s. 8d. a day or £450 3s. 4d. a year, with the same allowances as are payable to permanent officers of their rank. Lodging money at the rate of £80 a year is usually allowed when employed on shore, without quarters in the United Kingdom, and £56 10s. a year in lieu of rations when not victualled in kind. On joining an allowance of £50 for uniform is made.

An officer engaged for three years is entitled to receive two months' notice of his services being no longer required. A gratuity of £8 6s. 8d. will be payable to officers for each completed month of service on completion of their period of service, or to any who are invalided for causes not within their own control before the completion of the prescribed period.

Transfer to Permanent Service.

A short-service surgeon lieutenant, after six months' service, may be considered, on application to the Secretary of the Admiralty, for transfer to the permanent service, and would be permitted to count his seniority from the date of entry for short service for purposes of promotion, increment of full pay, and for retired pay; but for purposes of retiring gratuity on the permanent officers' scale his service will reckon only from the date of transfer to the permanent list.

Antedates of Seniority on Account of Civil Hospital Appointments held before Entry.

Officers who have held appointments as medical or surgical officers in civil hospitals for any period prior to entry, after becoming qualified medical practitioners, are eligible to have their seniorities antedated by not more than one year. The eligibility of appointments in civil hospitals to count for time will be decided by the Medical Director-General of the Navy.

The increase of seniority will count for the purpose of increase of full and retired pay, etc., as from date of transfer to the permanent list in the case of surgeon lieutenants for short service. Short-service surgeon lieutenants claiming antedates of seniority must apply for transfer within eighteen months of entry.

Promotion.

Promotion to surgeon commander is attained on completion of twelve years' service, and officers of that rank are selected for promotion to the twenty-seven higher ranks (surgeon captain, surgeon rear-admiral, and Medical Director-General) as vacancies occur.

Officers obtaining more than 75 per cent. of marks at the examinations held at the termination of Parts I and II of the course for promotion to surgeon commander are eligible for advances of seniority as follows:

Over 75 per cent. marks...	12 months.
„ 85 „ „ „	18 months.

Special promotions (limited in number) may be made to the ranks of surgeon commander and surgeon lieutenant commander in cases of distinguished service or conspicuous professional merit.

Medals and Prizes.

The Gilbert Blane Medal, awarded annually to the surgeon lieutenant commander who obtains the highest aggregate marks at the examination for promotion to the rank of surgeon commander, and the Chadwick Naval Prize, the North Persian Forces Memorial Medal, and the Parkes Memorial Prize are open to naval medical officers.

Post-Graduate Instruction in the Naval Medical Service.

Course on Entry.—A course of two months' duration at the Royal Naval Hospital, Haslar, is given to each short-service officer on entry.

General Professional Courses.—These courses at the Royal Naval Hospital, Haslar, of four months' duration, are normally arranged for officers lower than surgeon captain's rank, once in every four years. The subjects of these courses of instruction are clinical medicine and surgery and allied subjects; and on the completion of the courses officers are appointed to a large naval hospital unless and until they receive appointments elsewhere.

Course for Promotion to Surgeon Commander.—This course, of five months' duration, is normally taken by officers of six to eight years' service. Three months of the course are spent at the London Hospital, and two months at the Naval Medical School, Royal Naval College, Greenwich.

Specialist Courses.—These courses, of three to six months' duration, are arranged at recognized civil teaching centres for officers selected for specialist posts, and officers will subsequently undergo

courses of three months' duration in their special subjects every four years while employed as specialists.

Post-Graduate Courses (Old Scheme).—The existing three months' post-graduate courses at civil hospitals will, to a large extent, be superseded by the general professional and specialist courses described above, but they will not be discontinued until the new courses have been in operation for some years.

Medical officers R.N. are given the opportunity to prepare for and take higher or specialist qualifications—for example, M.D., M.R.C.P., F.R.C.S., D.P.H., D.T.M., etc.

Rates of Pay.

The current rates of full pay and retired pay are set out below. They represent a deduction of 7 per cent. from the standard rates which were fixed in 1920, when the cost of living was high; 20 per cent. of the standard rate is regarded as variable as the cost of living rises or falls.

Full Pay.

	Per Annum. £ £
Surgeon Lieutenant (short service and permanent service)	450 to 493
Surgeon Lieutenant Commander (promoted after 6 years' service)	593 to 627
Surgeon Commander (promoted after a further 6 years' service)	763 to 967
Surgeon Captain (promoted by selection)	1,104 to 1,367
Surgeon Rear-Admiral (promoted by selection) ...	1,782
Medical Director-General (Surgeon Vice-Admiral)	2,325

There are also allowances which form a substantial addition to the rates of pay. There are sixty specialist appointments open to medical officers. They comprise specialist posts in medicine, surgery, diseases of the eye, ear, nose, and throat, radiology, hygiene, etc., and an allowance at the rate of 5s. a day is payable to holders of them.

Medical officers in charge of naval hospitals and sick quarters receive charge pay on the following scale:

Surgeon Rear-Admirals and Surgeon Captains ...	10s. a day.
Surgeon Commanders	5s. a day.

Maximum Retired Pay.

(Approximate current rates.)

	£	Age for compulsory retirement.
Surgeon Vice-Admiral	1,112	On vacating office.
Surgeon Rear-Admiral	940	 60
Surgeon Captain	837	 55
Surgeon Commander	558	 50
Surgeon Lieutenant Commander and Surgeon Lieutenant	419	 45

Thus an officer who is not promoted above the rank of Surgeon Commander would be compulsorily retired at the age of 50.

Gratuities on Retirement.

The following gratuities are payable if an officer of the permanent list is permitted to retire voluntarily:

	£
After 4 years' full-pay service...	500
,, 8 ,, ,, ,, ...	1,000
,, 12 ,, ,, ,, ...	1,500
,, 16 ,, ,, ,, ...	2,250

Further Particulars.

Full particulars and a form of declaration can be obtained from the Medical Director-General, Admiralty, Queen Anne's Chambers, Tothill Street, London, S.W.1.

ARMY MEDICAL SERVICES.

ENTRANCE to the Royal Army Medical Corps, either by competitive examination or by selection, as decided by the Army Council, will take place half-yearly, in January and July. The examinations in medicine and surgery are entirely of a clinical and practical character, partly written and partly oral.

In addition to the grant of permanent commissions, the War Office offers a number of temporary commissions in the Royal Army Medical Corps, the holders of which may be invited at the end of twelve months' service (if suitable, and provided that vacancies exist) to accept permanent commissions in the Royal Army Medical Corps. If a permanent commission is accepted the temporary service is allowed to count as the equivalent of permanent service for promotion, increase of pay, and retired pay. These conditions enable the young medical man to make acquaintance with army life, without detriment to his ultimate prospects, before deciding whether to make a permanent career in the Royal Army Medical Corps.

The regulations for admission, giving full details, can be obtained from the Under Secretary of State (A.M.D.1), War Office, Whitehall, London, S.W.1, and should be carefully studied. A personal interview with a representative of the Director-General, Army Medical Services, is readily obtainable.

The rates of pay and allowances are good; the opportunities of post-graduate study are generous, and the work is varied, responsible, and interesting. The gratuities after certain periods of service enable an officer, should he so desire, to leave the service with a capital sum large enough to go a long way towards re-establishing himself in civil life, and, further, the knowledge of the world and the comradeship of his fellow officers that he has gained in the army will be of no small value to him.

New entrants, who must be 22 and not over 28 years of age, are commissioned in the rank of lieutenant; the first six months of service are spent on probation, during which time, in addition to their military training at the Royal Army Medical Corps Depot at Aldershot, they undergo a probationary course at the Royal Army Medical College in London, in hygiene, pathology, tropical medicine, military surgery, recruiting, the prevention and treatment of venereal disease, and the elements of army administration. At the end of this course, and after qualifying at the necessary examinations, their commissions are confirmed and they take their places in seniority according to the total marks obtained at all examinations up to that date. Officers Training Corps service, with possession of certificate "A" or "B" (medical), carries a definite value in marks in this total.

An entrant who is holding or about to hold at the time of the entrance examination an approved whole-time appointment at a recognized civil hospital may be seconded while holding such an appointment up to a maximum period of twelve months. A candidate who has held such an appointment within six months of entry may be granted an antedate up to twelve months in respect of the period the appointment was held. This secondment and antedate count in all respects as commissioned service, except that pay will not be issued for that period. The Army Council is endeavouring to arrange for all officers who have not themselves obtained a civil hospital appointment to be given a house appointment in a civil hospital for six months, shortly after they receive their commissions.

After a total period of one year's service at home, the young officer goes abroad, probably to India, for his first tour of foreign service. Here he gains his first practical experience of tropical disease and tropical hygiene, and possibly his first experience of active service on the frontiers of India. His tour abroad lasts five years, with probably six months' leave home during that time. On returning home the R.A.M.C. officer has the opportunity to decide whether he will remain in the Corps or accept the gratuity of £1,000 after seven years' service and try his fortune in civil life. If he elects to remain, he will, between his eighth and twelfth year of service, undergo a course of post-graduate study at the Royal Army Medical College and the London hospitals of five months' duration, followed by a course of study of a special subject selected by himself, provided he has shown special aptitude in the post-graduate course or during his previous service. During the period of study he remains on full pay and the fees of the course are paid by the State. When qualified in his special subject the officer is eligible for a specialist appointment. The total number of these appointments is 108, and the additional rate of pay 4s. 8d. a day. After this post-graduate course the officer probably proceeds abroad again, and promotion to major rapidly ensues; from that time onward he receives regular successive increases of pay and is eligible for additional and charge pay as well. Directorates of hygiene and pathology, and the appointment of two serving officers as consultants in medicine and surgery, have been instituted, and have proved a marked success. All these appointments are of the rank of colonel or major-general, and were devised to permit specially selected officers to rise through all ranks to that of major-general on the strength of their professional or purely scientific work.

Under these conditions the possibilities for good workers are very great in the Royal Army Medical Corps. There is scope for original research in tropical disease, in preventive medicine, and in bacteriology, as well as in the large clinical field open to the specialist in medicine, surgery, or gynaecology, in venereal disease, and in

Pay and Allowances at Home.

Rank.	Pay per Diem.*	Rations.†	Servant.	Married.			Unmarried.		Approximate Yearly Total.	
				Lodging.	Fuel and Light (Average).	Furniture Allowance.	Lodging.	Fuel and Light (Average).	Married.	Unmarried.
	£ s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.	£ s. d.
Lieutenant	1 0 6	1 6	2 0	3 6	1 8	2 0	2 6	0 8	569 0 0	457 0 0
Captain	1 5 2	1 6	2 0	4 6	2 9	2 0	2 6	0 8	692 0 0	582 0 0
Captain after 8 years' service	1 7 10	1 6	2 0	4 6	2 9	2 0	2 6	0 8	741 0 0	631 0 0
Captain after 10 years' service	1 10 2	1 6	2 0	4 6	2 9	2 0	2 6	0 8	785 0 0	674 0 0
Major	1 11 10	1 6	2 0	4 6	2 11	2 0	4 0	1 3	872 0 0	794 0 0
Major after 15 years' service	1 19 6	1 6	2 0	4 6	2 11	2 0	4 0	1 3	957 0 0	881 0 0
Major after 18 years' service	2 1 10	1 6	2 0	4 6	2 11	2 0	4 0	1 3	999 0 0	923 0 0
Major after 20 years' service	2 6 6	1 6	2 0	4 6	2 11	2 0	4 0	1 3	1085 0 0	1009 0 0
Lieutenant-Colonel	2 13 6	1 6	2 0	4 6	3 0	2 0	4 6	2 5	1213 0 0	1166 0 0
Lieutenant-Colonel after 3 years' service as such	2 18 2	1 6	2 0	4 6	3 0	2 0	4 6	2 5	1299 0 0	1252 0 0
Colonel	3 5 2	1 6	2 0	5 6	3 11	2 0	5 6	2 9	1461 0 0	1403 0 0
Major-General	4 8 4	1 6	4 0	11 0	5 0	2 0	11 0	3 11	2038 0 0	1983 0 0

* Pay Warrant rates (as amended by A.O. 196/26) less 7 per cent. from July 1st, 1930, vide A.O. 237 of 1929. The Pay Warrant rates are subject to revision to an extent not exceeding 20 per cent., according to variation in the cost of living. The next revision takes place from July 1st, 1931.

† Rates of Allowances vary from time to time, and issues are subject to conditions laid down in the Allowance Regulations.

ophthalmology. Child welfare is also undertaken systematically by officers of the Royal Army Medical Corps. At the same time, instruction in administration is continuous. There are also many appointments carrying administrative responsibility to those officers who display capacity for this duty.

Promotion.

Promotion takes place automatically to captain after three and a half years' and to major after twelve years' service, provided the officer is qualified and recommended for promotion. Promotion to the higher ranks is by selection from those senior in the rank below, but special promotion by brevet or otherwise is open to officers of the Royal Army Medical Corps.

Pay and Allowances.

The rates of pay and allowances are given in the table given above. In addition, an officer at home in charge of a hospital receives charge pay, the daily amounts being from 2s. 6d. to 10s., according to the number of beds. There are other appointments for which charge pay is given from 5s. to 10s. daily.

Retirement and Retired Pay.

Retired pay will consist of two parts: (*a*) a service element based on the officer's total service; (*b*) a rank element for the substantive rank from which the officer retires. An officer with less than twenty complete years' service will not be eligible for retired pay on voluntary retirement. The scale, subject to the reduction of 7 per cent. referred to on page 397, is, for the service element, £15 a year for each completed year of service as a medical officer. For the rank element the scale is as follows:

Substantive Rank from which Retired.	After Completing 1 Year's Service in the Rank.	After Completing each Additional Year's Service.	Maximum Rank Element.
	£	£	£
Major	12	12	120
Lieutenant-Colonel	150	30	240
Colonel	290	50	390
Major-General	440	50	540
Lieutenant-General	590	50	690

The retired pay of an officer retiring with less than one complete year's service in the rank from which he retires will be assessed as though he had retired from the rank below.

Rates of Pay for Officers Serving in India.

Rank.	Rates of Pay per Month.					
	Unmarried.			Married.			
	Pay of Rank.	Unmarried Rates of Lodging Allowance.	Total.	Pay of Rank.	Married Rates of Lodging Allowance.	Marriage Allowance.	Total.
	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.
Lieutenant	625	25	650	625	50	65	*740
Captain	755	45	800	755	90	100	*945
Captain after 8 years' service	860	45	905	860	90	100	1050
Captain after 10 years' service	930	45	975	930	90	100	1120
Major	1070	55	1125	1070	110	90	1270
Major after 15 years' service	1170	55	1225	1170	110	90	1370
Major after 18 years' service	1320	55	1375	1320	110	90	1520
Major after 20 years' service	1420	55	1475	1420	110	90	1620
Lieutenant-Colonel	1575	75	1650	1575	150	75	1800
Lieutenant-Colonel after 3 years' service	1750	75	1825	1750	150	75	1975

* Married rate of pay is not admissible to officers whose age is under 30.

The maximum standard rates of retired pay are as follows:

Captain and Subaltern	£300
Major	£450
Lieutenant-Colonel	£600
Colonel	£800
Major-General	£1,000
Lieutenant-General	£1,200

The above rates are those laid down in the Pay Warrant. They have been reduced by 7 per cent. as from July 1st, 1930. Further revision may take place triennially to an extent not exceeding 20 per cent., according to variation in the cost of living.

Officers with seven and less than twenty years' service as medical officers may be permitted to retire with a gratuity in accordance with the following scale:

After 7 years' service as a medical officer	£1,000
After 15 years' service as a medical officer	£2,800
After 18 years' service as a medical officer	£3,500

Seconded Service.

An officer may be permitted to accept employment in the Foreign or Colonial Offices; when so seconded he is not eligible for pay or allowances from army funds, but his service continues to reckon towards promotion and, under certain conditions, towards increase of pay, pension, or gratuity.

THE ARMY DENTAL CORPS.

The corps is administered by the Director-General, Army Medical Services. The regulations for admission to the Army Dental Corps should be obtained from the Under Secretary of State, War Office, and carefully studied.

ROYAL AIR FORCE MEDICAL SERVICE.

THE Air Council attaches great importance to attracting into the R.A.F.M.S. the best type of medical man, since on the capacity of the medical service depends in a peculiar degree the safety and efficiency of the Royal Air Force. The duties of these medical officers include, not only the prevention and treatment of those ordinary diseases to which the personnel of any fighting service are liable, but the special study of the mental and physical stresses imposed on the airman in diverse circumstances and climates —a new branch of medicine which still provides considerable scope for research.

As promotion to the higher medical ranks is by selection from officers who are eligible by reason of length of service, and as a certain proportion of the higher ranks will be reserved for purely professional as opposed to administrative appointments, it will be seen that there are excellent prospects for the young medical officer who exhibits ability and energy in professional work as well as for those who develop a talent for administration. Duties will, as a matter of course, give him flying experience as a passenger, which is necessary for the proper study of the medical problems of aviation and for gaining first-hand knowledge of the conditions under which his comrades serve.

Commissions.

The establishment will consist partly of permanent and partly of short-service officers.

An officer will, on first entry, be granted a short-service commission for a period of three years on the active list (which may be extended to five years at the discretion of the Air Council, if the officer so wishes, on the recommendation of the Director of Medical Services) and of four years in the Reserve of Air Force Officers. Selections for permanent commissions will be made from officers holding short-service commissions, and those who are not selected will be transferred to the Reserve at the expiration of their period of service on the active list. For those entrants who desire it, the prospect of obtaining a permanent commission is approximately an even one.

Arrangements are in force under which an officer granted a short-service commission who has previously held a resident appointment in a recognized civil hospital may, subject to certain conditions, be granted an antedate of the commission equal to the period of the appointment up to a maximum of one year. A similar arrangement obtains as regards a recognized hospital appointment which is held or about to be held at the date when the short-service commission is granted.

An officer who has been seconded or whose commission has been antedated as above will be required to serve for a minimum period of three years on the active list from the date of joining for actual R.A.F. duty.

Officers who have been granted permanent commissions may be permitted to attend, for a period not exceeding nine months, a post-graduate course in general medicine and surgery, tropical and preventive medicine, and other special subjects. Such permission may be granted at any time when the exigencies of the service permit during the first sixteen years of service, and when attending these courses officers will receive full pay and allowances.

New entrants into the R.A.F.M.S. will be commissioned as Flying Officers (Medical), and will be eligible for promotion to the rank of Flight Lieutenant (Medical) after two years' service. Officers selected for permanent commissions will normally be promoted to the rank of Squadron Leader after ten years' total service. Accelerated promotion may be granted in a limited number of cases to officers who show exceptional ability after the completion of eight years' service. Promotion

Royal Air Force Medical Branch: Rates of Pay and Allowances.

Rank.	Pay.* Daily Rates. Standard.	Pay.* Daily Rates. Current.	Pay.* Per Annum (Current Rates).	Cash Allowances at Home Rates in lieu of Quarters, Rations, and Servant, if not available in kind (per annum).† Married.	Cash Allowances at Home Rates in lieu of Quarters, Rations, and Servant, if not available in kind (per annum).† Unmarried.	Pay plus Allowances (per annum). Married.	Pay plus Allowances (per annum). Unmarried.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Flying Officer	1 4 0	1 2 4	407 11 8	194 13 4	121 13 4	602 5 0	529 5 0
Flight Lieutenant	1 6 0	1 4 2	441 0 10	232 13 9	121 13 4	673 14 7	562 14 2
Ditto, after 2 years as such ...	1 8 0	1 6 0	474 10 0	232 13 9	121 13 4	707 3 9	596 3 4
Ditto, after 4 years as such ...	1 10 0	1 7 10	507 19 2	232 13 9	121 13 4	740 12 11	629 12 6
Squadron Leader	1 14 0	1 11 8	577 18 4	235 14 7	159 13 9	813 12 11	737 12 1
Ditto, after 2 years as such ...	1 18 0	1 15 4	644 16 8	235 14 7	159 13 9	880 11 3	804 10 5
Ditto, after 4 years as such ...	2 0 0	1 17 2	678 5 10	235 14 7	159 13 9	914 0 5	837 19 7
Ditto, after 6 years as such ...	2 4 0	2 1 0	748 5 0	235 14 7	159 13 9	983 19 7	907 18 9
Ditto, after 8 years as such ...	2 8 0	2 4 8	815 3 4	235 14 7	159 13 9	10 0 17 11	974 17 1
Ditto, after 10 years as such ...	2 10 0	2 6 6	848 12 6	235 14 7	159 13 9	1084 7 1	1008 6 3
Wing Commander	2 15 0	2 11 2	933 15 10	237 5 0	190 2 1	1171 0 10	1123 17 11
Ditto, after 2 years as such ...	2 17 0	2 13 0	967 5 0	237 5 0	190 2 1	1204 10 0	1157 7 1
Ditto, after 4 years as such ...	3 3 0	2 18 8	1070 13 4	237 5 0	190 2 1	1307 18 4	1260 15 5
Group Captain	3 10 0	3 5 2	1159 5 10	303 14 7	250 18 9	1498 0 5	1440 4 7
Air Commodore	4 0 0	3 14 4	1356 11 8	365 0 0	311 15 5	1721 11 8	1668 7 1
Air Vice-Marshal	5 0 0	4 13 0	1597 5 0	428 17 6	372 12 1	2126 2 6	2069 17 1

* Except for periods of service under Indian administration. For such periods officers receive pay and allowances at rates and subject to conditions authorized from time to time by the Government of India.

† These allowances are issued only when accommodation, fuel and light, rations and personal attendance are not available in kind. Normally, provision in kind is available for junior officers. "Married" rates of allowances are payable only to married officers who have reached the age of 30 or the rank of squadron leader. A colonial allowance is granted in certain commands abroad. The rates and general scheme of allowances are liable to revision as circumstances may require.

within establishment to the rank of Wing Commander will be by selection at any period after sixteen years' total service, and to that of Group Captain by selection at any period after twenty-two years' service.

There will be no competitive examination on entry; candidates must be under 28 years of age, be British subjects, the sons of British subjects, and of pure European descent, and will be interviewed by a Selection Board at the Air Ministry, London, presided over by the Director of Medical Services, Royal Air Force, before acceptance, and will be required to pass a medical examination.

On appointment entrants will undergo an initial course, during which they will be given instruction in the special medical aspects of aviation; the organization and administration of the Royal Air Force; and the general and special duties to be performed by officers in the Medical Branch.

Uniform Allowance.

An allowance of £50 towards the cost of uniform is made on joining to candidates who have not had previous commissioned service in H.M. Forces.

Pay and Allowances.

The emoluments of medical officers of the Royal Air Force are given in outline on page 397. The standard rates of pay and retired pay were drawn up on the basis of the high cost of living in 1919, and 20 per cent. of each of the standard rates is detachable and subject to alteration upward or downward in relation to the increase or decrease of the cost of living above or below the cost in July, 1919. Under this provision the current rates now in force represent a reduction of approximately 7 per cent. on the standard rates. The next revision will take effect from July 1st, 1931.

Retired Pay.

The minimum period of service qualifying for retirement on retired pay is twenty years. Standard rates of retired pay are as follows:

Air Officers.—Air Vice-Marshal, £790 to £1,010 per annum; Air Commodore, £650 to £950 per annum.

RETIRED PAY (PERMANENT OFFICERS).

Officers Below Air Rank.

Age on Retirement.	Standard Yearly Rate of Retired Pay.	Years of Service.	Addition for each Extra Year of Service.*	Deduction for each Deficient Year of Service.*
	£		£	£
40	300	17	15	15
41	337	17	15	15
42	375	18	15	15
43	412	18	15	15
44	450	19	15	15
45	487	19	15	15
46	525	20	15	15
47	562	20	15	15
48	600	21	15	15
49	637	21	15	15
50	675	22	15	15
51	697	22	22	15
52	720	23	22	15
53	742	23	22	15
54	765	24	22	15
55	790	24	22	15

* Limited to five years.

The maximum standard rates of retired pay and the compulsory retiring ages for the several ranks are:

Rank.	Yearly Rate of Retired Pay.	Compulsory Retiring Age.
	£	
Air Vice-Marshal	1,010	60
Air Commodore	950	57
Group Captain	900	55
Wing Commander	600	51
Squadron Leader	500	48

Gratuities.

A permanent officer allowed to retire before having qualified for retired pay may be granted a gratuity provided he has not less than ten years' commissioned service—namely, £1,500 if he has ten but less than fifteen years' commissioned service; £2,500 after fifteen or more than fifteen years'.

Short-service officers will be eligible on passing to the Reserve for gratuities on the following scale: £100 for each of the first two complete years of service, £150 for each of the third and fourth complete years, and £200 for the fifth complete year; that is, for three years' service on the active list £350; for five years' £700.

These gratuities will not be payable to officers granted permanent commissions, but their service on a short-service commission will count towards retired pay.

Further particulars may be obtained on application to the Secretary, Air Ministry (D.M.S.), Adastral House, Kingsway, W.C.2.

INDIAN MEDICAL SERVICE.

In 1928 the terms on which the Indian Medical Service would in future be constituted were announced. The Association has expressed its satisfaction with the new position, and commends the conditions of the Indian Medical Service to the consideration of the junior members of the profession.

The new conditions provide, *inter alia*:

(i) That the I.M.S. will continue to be retained primarily to meet the needs of the Indian Army, the Local Governments being required to employ a stated number of I.M.S. officers in order to maintain the necessary minimum war reserve and to provide European medical attendance for European officers of the I.C.S. and their families.

(ii) That the total number of I.M.S. officers required for civil employment will be calculated at 302, of which 212 will be Europeans and 90 Indians.

(iii) That there will be 237 posts for these officers after allowing for leave and study reserve, 178 of which will be in the provinces and 59 under the Government of India.

These posts will be filled as follows:

Under Provincial Governments: 178 posts, of which 112 must be held by European officers, the remaining 66 to be open to Europeans or Indians.

Under Government of India: 59 posts, of which 28 will be open to Europeans or Indians, the remaining 31 being open to Europeans only.

(iv) That the medical requirements of European members of the Superior Civil Services are based on data which will change from year to year as the proportion of European to Indian officers gradually diminishes, and will be subject, therefore, to periodical revision.

(v) That certain rules will come into force as an integral portion of the scheme. These rules deal with the question of employment on the military and civil side, and provide that there is a liability on the part of all future entrants to the Service to serve on either the military or the civil side, which latter may include service under an Indian administrative chief. In practice, however, an officer is not transferred to civil unless he requests to serve on that side.

Conditions of Service.

European candidates for admission to the I.M.S. must be British subjects under 32 years of age, and must be registered under the Medical Acts in Great Britain and Northern Ireland. A gratuity of £1,000 on retirement after six years' service, or £2,500 after twelve years' service, together with free return passages, is offered.

The Indian Medical Service offers wide opportunities of medical experience, including clinical, preventive, specialist, and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel, and by selection to the ranks of Colonel and Major-General. After two years' Indian service an officer may apply for transfer to the civil side, from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes; to specialist (for example, public health and bacteriological) services; to research posts; and to professorships at the Medical Schools.

The monthly rates of pay for European officers in the Service who have a "non-Asiatic" domicile are as follows:

Rank. 1	Service in Rank. 2	Basic Pay. 3	Overseas Pay. 4	Year of Total Service. 5
		Rs.	Rs.	
			150	1st
Lieutenant		500	150	2nd
			150	3rd
Captain ...	(i) During first 3 years' service as Captain	650	150	4th
			£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 years' service as Captain	750	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years' service as Captain	850	£25	10th
			£25	11th
			£30	12th
Major ...	(i) During first 3 years' service as Major	950		
	(ii) With more than 3 and less than 6 years' service as Major	1100		
	(iii) With more than 6 years' service as Major	1250		
Lieut.-Col.	(i) Until completion of 23 years' total service	1500	£30	13th and over
	(ii) During 24th and 25th years' total service	1600		
	(iii) After completion of 25 years' total service	1700		
	(iv) When selected for increased pay	1850		

Extras.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate, secondment, or antedate and secondment combined, is limited to one year.

Officers on appointment will receive an outfit allowance of £50.

With the exception of Administrative Officers, military or civil, and officers holding certain special appointments, officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

The rates of pension are as follows.

	Per annum. £
After 17 years' service for pension	400
„ 18 „ „ „	430
„ 19 „ „ „	460
„ 20 „ „ „	500
„ 21 „ „ „	540
„ 22 „ „ „	580
„ 23 „ „ „	620
„ 24 „ „ „	660
„ 25 „ „ „	700
„ 26 „ „ „	750
„ 27 „ „ „	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all, the revision being undertaken triennally with effect from July 1st, 1927. A reduction of 4½ per cent. has been made on this account from the amounts shown.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

An officer on appointment is provided with a free passage to India. The wives and families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India, subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

Officers are required to undergo courses of instruction at the Royal Army Medical College, and at Aldershot, lasting approximately six months, prior to their embarkation for India on first appointment.

Further particulars may be obtained from the Under Secretary of State for India, Military Department, India Office, London, S.W.1.

PRISON MEDICAL SERVICE.

CANDIDATES for the prison medical staff are approved by the Secretary of State for the Home Office on the recommendation of the Prison Commissioners. The Chairman of the Board is Mr. A. Maxwell, C.B. Application for employment may be made to the Board on a special form, which can be obtained from the Secretary, Prison Commission, Home Office, London, S.W.1.

In the smaller prisons the medical officer is usually a local practitioner, but in the larger the members of the medical staff are required to devote their whole time to the service. In the case of those required to give their whole time to the service the appointment in the first instance is to the post of medical officer Class II, and from the seniors of this rank the medical officers Class I are selected as vacancies occur.

Largely as a result of action taken by the British Medical Association some years ago, the salaries of prison medical officers were improved, and now are: Medical officer Class II, £350, rising by annual increments of £20 to £600; medical officer Class I, £650, rising by annual increments of £25 to £800. Unfurnished quarters are provided, or an allowance in lieu is made. The civil service bonus is paid on the salary. The Association has recently represented to the Royal Commission on the Civil Service, in connexion with a proposal to stabilize salary and bonus, that the remuneration of prison medical officers should be increased.

There are 15 medical officers Class II, 12 medical officers Class I, and 23 part-time medical officers. The service is a small one, and therefore vacancies are comparatively rare and promotion is very slow.

LOCAL GOVERNMENT (POOR LAW) MEDICAL SERVICES.

A CONSIDERABLE change in administrative conditions in the Poor Law in England and Wales has been effected by the passing of the Local Government Act, 1929, which from April 1st, 1930, abolished the old boards of guardians, and transferred their functions to the county councils and county borough councils. This should result in a higher degree of specialization in Poor Law work, particularly on the medical side, and a closer assimilation to other public health services.

A number of whole-time appointments exist under these new Poor Law authorities in Great Britain, certain of which, notably in the metropolis and the chief provincial cities, maintain large well-equipped hospitals organized under purely medical administration. Posts are available to medical practitioners as superintendents and assistant officers in hospitals and infirmaries, and as resident officers in other institutions, such as poorhouses, workhouses, etc. Conditions and salaries show considerable variation; salaries for resident assistant medical officers in Poor Law infirmaries usually range from £200 to £450 a year, with full board, the duties being much the same as, but as a whole more responsible than, those of a house-physician or house-surgeon in a general hospital. Medical superintendents are paid from £600 to £1,600 a year, with house, light, coal, laundry, etc., and in some cases the first assistant is termed deputy medical superintendent and receives £450 to £750 a year, with similar emoluments. This service, therefore, offers openings for young practitioners and the prospect of a reasonable degree of progress for those who may choose to make it their career, with security of tenure, and provision for superannuation. It should be added that the attractiveness or otherwise of any particular post has been, and still may be, in some degree affected by the policy adopted by the authority under whose jurisdiction it falls. In the more advanced areas there is a high degree of differentiation in treatment between the sick and mentally affected, and the purely pauper class (between the hospital and the workhouse); the tendency in such areas has been to develop the hospital services on lines approximating to those ruling in the voluntary hospitals. In the majority of Poor Law institutions, however, lay control, through the administration by a workhouse master of the whole organization, has been preserved, and medical appointments in such circumstances are less attractive.

In addition to the full-time appointments of the character mentioned, the Local Government (Poor Law) Service offers numerous part-time posts, such as those of district medical officer, parish medical officer, etc., which are practically all held by general practitioners. Public vaccinators are also appointed under contract with the councils of the counties and county boroughs, except in London, where the municipal boroughs are responsible for the vaccination service.

MEDICAL PRACTICE IN BRITISH DOMINIONS AND FOREIGN COUNTRIES.

MEDICAL Acts have now been passed in almost all places forming part of the British Empire beyond the seas, and registers of duly qualified practitioners are consequently maintained. To these registers medical men educated in the United Kingdom are generally admissible merely on payment of a registration fee, providing they produce evidence that they are of good repute and are either registered or eligible for registration in the United Kingdom, as the local requirement may be. The only exception to this statement that need be made relates to the Dominion of Canada. Each of its provinces acts in medical matters as an independent State. The result has been that reciprocity of practice has in the past been established between this country and all the provinces of Canada except British Columbia, where certain obstacles were never overcome. It has, however, to be recorded that reciprocity with Saskatchewan, New Brunswick, Ontario, and Quebec has recently been brought to an end by those provinces.

We would advise any medical man proposing to practise in Canada first to communicate with the Provincial Registrar, stating what degrees or diplomas he holds, and asking for information as to the precise steps he must take in order to obtain admission to the Provincial Register. The Licence of the Dominion Council, which can only be obtained after examination, entitles its holder to practise in any of the provinces of Canada, though in regard to Quebec there is a proviso that "he must have been registered in the province five years prior to the application for the recognition of the Dominion Licence." In order to sit for the examination for the Dominion Licence, it is necessary to obtain a licence from one of the provinces, but this can be obtained from one of those with whom reciprocity has been established.

Italy and Japan are the only two foreign States with which complete medical reciprocity has been established, though there are other countries which grant a limited recognition to British qualifications. Generally speaking, in Continental countries (with the exception of the kingdom of Italy) a British medical man desiring to exercise his profession therein must pass practically the same examinations as those imposed on natives of the country. The same observation applies to all foreign States in the South American continent. Each of the United States of North America has its own laws and regulations governing medical practice; and all of them require the holder of a British qualification to submit to an examination. A number of the States, including New York, Illinois, Michigan, and Indiana, require naturalization.

A pamphlet showing the conditions under which medical and dental practitioners legally qualified in their own country may practise abroad can be obtained from the office of the General Medical Council, 44, Hallam Street, Portland Place, London, W.1, price 2s. 6d., or 2s. 9d. post free in the United Kingdom. Practitioners who think of going abroad to practise will find therein much useful information, including the name of the official in each country to whom requests for further particulars should be addressed. A new edition was published in 1929.

MEDICAL APPOINTMENTS IN THE COLONIES AND MANDATED TERRITORIES.

MEDICAL appointments in the self-governing Dominions and the territories under their control, and in Southern Rhodesia and Malta, are made by the Governments concerned, and are not in general open to candidates in the United Kingdom. In Ceylon, Mauritius, Jamaica, Barbados, the Bahamas, and Bermuda vacancies are practically always filled by the appointment of qualified local candidates or, in the case of some of the higher posts, by transfer from other colonies. Appointments to the medical services of the remaining colonies and other territories under the administrative direction of the Colonial Office are made by the Secretary of State for the Colonies in this country. Such appointments are to a given colony or group of colonies, for there is no unified service directly administered from the Colonial Office. It follows that conditions of service and superannuation are in the main determined by the economic resources and general public health policy of the individual colony and its local government, and vary almost as widely as do conditions of climate. Moreover, the extent of the control exercised by the Colonial Office varies according to the constitutional status of the particular colony, and the detailed information available centrally is not always complete. The intending candidate, therefore, should make comprehensive inquiries as to local conditions, and particularly as to facilities for private practice where this is included in the terms of appointment. He will also do well to supplement official information by reference to the Medical Secretary at the Central Office of the British Medical Association (Tavistock Square, London, W.C.1), where reports obtained from time to time from the local Branches are available. This is the more necessary because facilities for transfer from the medical service of one colony to that of another are as yet practically non-existent, except in connexion with specialist and senior appointments. This sets strict limits upon the opportunities for promotion.

To those physically and mentally suited to the climatic and social conditions peculiar to the various colonies the Colonial Medical Services should, and in some cases do, offer a field of professional activity rich in interest and in opportunity for pioneer work, with increasing facilities for specialization and research.

The prevailing trade depression and the consequent curtailment of revenue have inevitably affected the health programme among other activities of the Colonial Governments, but this temporary check is offset by growing appreciation among the local administrations of the potentialities of sanitation and the quickened parliamentary and departmental interest in the development of a sound medical policy. It is significant that in the first six months of its existence the Colonial Development Advisory Committee has spent a total of £120,000 in grants and loans for schemes for promoting the health of local communities in the various colonies, while an interdepartmental committee has been appointed to frame comprehensive proposals for ensuring the best possible use of available funds in the promotion of medical research and the application of its results to public health problems in the Colonial Empire. The recommendations of the committee on the system of appointment in the Colonial Office and the Colonial Services, published in May, 1930, mark an important step in the development of the Colonial Services in general, including the medical services. Acceptance by the Secretary of State for the Colonies and the Colonial Office Conference of the principle of unification has at last cleared the way for the elaboration of practical schemes for its application. Such unification would secure to members of the smaller medical services much-needed opportunities for promotion by transfer. Meanwhile, reorganization of the work of the promotions branch of the Colonial Office on the lines recommended by the committee should lead to welcome improvements in more than one direction.

The outlook for the Colonial Medical Service is thus in the main a hopeful one, and especially so in the larger and better organized branches. It is unfortunate that this cannot be said of all of the smaller services. These are in some cases still hampered by conditions which make efficiency unattainable. Hence the urgent necessity remains for making careful and sufficient inquiry as to the position in any given service before accepting appointment.

The medical services recruited in this country by the Secretary of State for the Colonies include those of West Africa, East Africa, Malaya, Hong-Kong, the West Indies, Fiji and the Western Pacific territories, and Palestine, besides a number of smaller services offering individually one or two appointments at an inadequate remuneration and with no prospect of promotion. Of late years certain medical appointments in the service of the Government of Iraq have been filled with the concurrence and normally upon the recommendation of the Secretary of State; but political conditions make fresh vacancies unlikely at present.

In the Fiji Medical Service, although the basic salary of district medical officers (£500, by £25 to £725) is below the £600 minimum recommended as adequate by the British Medical Association, this fact is offset by the concession of allowances of from £175 to £275 in five of the districts, the value of private practice in the remaining seven being estimated at from £100 to £600 a year.

The services in the West Indies and some of the smaller colonies have not yet conceded the £600 minimum commencing salary, and whilst facilities for remunerative private practice, general conditions of service, and a relatively low cost of living must in some instances be taken into consideration, these compensations are by no means universal. The service in the Leeward Islands is in a condition which requires special notice by way of warning; but the position in the Windward Islands has now been considerably improved.

In general, candidates for these services must be between the ages of 23 and 35, although these limits are not for the moment absolute. Appointments are, subject to a varying period of probation, for the most part classed as permanent and pensionable, but there are some appointments by agreement for a specified limited term of service.

There is no entrance examination, but practitioners selected for appointment must obtain a certificate of physical fitness from one of the consulting physicians to the Colonial Office. Post-graduate experience in hospital appointments is desirable, and in some cases special allowances are conceded to the holders of a D.P.H. Successful candidates are normally required to undergo an approved course of instruction in tropical medicine, the fees for their tuition being defrayed by the Government and an allowance being paid during their instruction.

There are appointments open to qualified medical women, chiefly in the larger services—for example, of East Africa, West Africa, and Malaya. At present some sixty medical women are employed in child welfare, maternity, and laboratory work. Salaries are the same as for men.

The bulk of the appointments made by the Secretary of State in this country are to the West African Medical Staff, the East African Medical Service, and the Medical Services in Malaya. These are the strongest individual services numerically, and therefore offer more frequent vacancies, better prospects of promotion, and better chances of specialist appointments than the smaller services.

West African Medical Staff.

This is amongst the best organized and best paid of the Colonial Services. The territories covered by the service include Nigeria, the Gold Coast, Sierra Leone, and the Gambia. Climatic conditions vary considerably over this area, but they are in general admittedly trying. This fact is at present recognized by the provision of more frequent leave periods than are usual elsewhere.

The service includes medical, public health, and laboratory divisions, and specialist posts are almost invariably filled by promotion from the staff. The rate of pay for a medical officer is £660 on appointment, rising by annual increments to £960, together with a seniority allowance of £72 a year after reaching £720. There are a considerable number of specialist and administrative posts carrying relatively high salaries, varying from £1,300, with duty allowance of £260, to £1,800, with duty allowance of £360. All appointments in the staff are pensionable. Officers may retire voluntarily on reaching 50 years of age, and may be called upon to retire at 55. Pensions are calculated at the rate of 1/480th of the officer's pensionable emoluments (salary and house allowance) in respect of each complete month of service. Alternatively a gratuity and reduced pension may be granted, if desired, under certain conditions. Gratuities of £1,000 or £1,250 may be drawn on retirement after nine or twelve years' service. Members of the West African Medical Staff are not usually permitted to take their wives or young children with them until they have acquired experience of the conditions of life and have obtained the sanction of the Governor. In the case of young children this is only exceptionally given.

African Medical Officers.

Membership of the West African Medical Staff is limited to British subjects of European parentage, but a number of Government appointments for African medical officers exist in the West African Colonies. These appointments carry salary on the scale £500-£25-£600, and there is a higher scale £600-£30-£720. In addition, in Nigeria and the Gold Coast, arrangements have been made for the employment of a few young African medical men temporarily on the hospital staffs, with a view to appointment to the Government service later, if suitable. In such cases a salary of £400 a year is paid.

East African Medical Service.

This service includes Kenya, Uganda, Tanganyika Territory, Nyasaland, Zanzibar, and British Somaliland. In East Africa there is very wide scope for clinical work, both medical and surgical, as well as for research and for preventive medicine and sanitation. The service as a whole is fully alive to its responsibilities and opportunities; individual initiative is encouraged, and the career of a medical officer depends, not on seniority alone, but to a large extent on his own capability. In all but a few stations conditions allow a medical officer's wife to accompany him, but this is not generally desirable on first appointment. In some dependencies the consent of the Governor must be obtained. The service includes a medical and a sanitary division. The former is open to those holding ordinary medical and surgical qualifications, post-graduate experience in a hospital appointment being an advantage; posts in the sanitary division will as far as possible be filled by those holding a Diploma in Public Health or a Diploma in Tropical Medicine and Hygiene. Climatic conditions vary considerably. In a considerable part of Kenya they approximate more to the temperate than the tropical zone; but there are some areas in the East African Dependencies where conditions more closely resemble those in West Africa. The rate of pay for a medical officer is from £600 on appointment, rising by annual increments of £30 to £840, and thereafter, subject to an efficiency bar at this point, by £40 to £920. Holders of the D.P.H. receive a special concession of two increments on appointment, or from the date of obtaining the diploma, thus reaching the maximum of the grade two years earlier than they would otherwise do. Private practice may be permitted in certain circumstances, but there is no right to it even in stations where opportunities may exist.

As in the case of the West African Medical Staff, a candidate can only apply for appointment to the East African Medical Service in general and is liable to transfer between the several dependencies, but he may express his preference for any particular colony, and his wishes will, we are informed, be met as far as possible. As a rule, transfer only takes place on promotion or at an officer's own request. The gratuities available on retirement after nine or twelve years' service are similar to those for the West African Medical Staff. Officers may elect or may be required to retire on pension on reaching the age of 50 years. Pensions are calculated at the rate of 1/480th of emoluments (including value of free quarters) for each completed month of service.

Medical Services in Malaya.

These services cover the Straits Settlements, the Federated Malay States, the unfederated States, and the State of Brunei in Borneo. The salary of 500 dollars a month, rising by 25 to 800 dollars, *plus* a temporary allowance of 10 per cent. for single and 20 per cent. for married officers, is generally considered adequate. A non-pensionable allowance of 100 dollars a month is paid to officers holding the D.P.H.

The climate of Malaya is, for the Tropics, very unhealthy. It varies little during the year. The mean maximum and minimum temperatures are 86.8° and 74.3° F. In some parts there are no marked rainy and dry seasons, the rainfall being evenly distributed throughout the year. In others there are a couple of dry months and a couple of exceptionally rainy months in the year. The average rainfall is about 100 inches a year, and vegetation is always green. People who lead regular, active lives have no difficulty in keeping in good health. European children do well in Malaya up to the age of about 6. Numerous hill bungalows are available already for rest and change, and a large Malayan hill station is about to be constructed at a height of over 5,000 feet at Cameron's Plateau, on the Perak-Pahang boundary.

The professional duties of a medical officer may include medical, surgical, medico-legal, and public health work. His administrative work comprises hospital administration, diets, returns, and financial work, and includes the inspection of smaller hospitals and dispensaries. Clerical work is reduced to the smallest possible amount. An endeavour is made to consider an officer's own bent when posting him for duty. Districts vary in size, and a certain amount of travelling will be necessary. The white population in each district varies. The district hospitals hold from 50 to 300 beds. There is a staff of locally recruited medical men, mostly trained at the Singapore College of Medicine. Asiatic dressers and trained hospital assistants are employed in hospitals and dispensaries. In addition to European sisters, there is a large local nursing staff. All hospital equipment is supplied by Government, including instruments. At both the Institute for Medical Research in Kuala Lumpur, Federated Malay States, and the King Edward VII College of Medicine, Singapore,

there are opportunities for research as well as for routine investigations. Promising officers may be stationed at the Institute for short periods if they can be spared from other duties. In addition to the full-time professional posts at the College of Medicine, several of the medical staff in Singapore hold part-time lectureships.

It may fairly be said that the Malayan Medical Services now offer considerable scope for suitable candidates. There are relatively to other services a large number of special appointments available in surgery, radiology, public health, and pathology, and to those seeking a career in teaching the professorships at the College of Medicine, Singapore, offer an additional attraction.

SUDAN MEDICAL SERVICE.

This service is a department of the Sudan Government, and includes a number of Syrian medical officers and a number of assistant medical officers who are natives of the Sudan. The British medical inspectors are from the outset senior to all other medical officers. The service offers ample opportunities for specialization and for research, as well as for general medical and surgical work.

The climate varies, but is not in general unfavourable, though hot. In the northern desert the nights are cool, even in summer, and the winter is pleasant and often cold. In the central zone there is a rainy season of about four months, during which large areas become malarious. The south is more tropical in character, and mosquito-protected houses, nets, and protective quinine are essential during the greater part of the year, though even here the winter months are cool and pleasant. It is not considered desirable for medical inspectors to be accompanied by their wives until they have gained some knowledge of the language and the general conditions of life.

The commencing pay of a medical inspector is £E.720. On confirmation of appointment and success in the requisite examinations in Arabic the salary is increased by periodic increments to £E.1,200. Five senior administrative posts carry higher salaries. There is a compulsory contribution of 5 per cent. of pay towards pension, which, for a medical inspector, amounts, after twenty years' service, to £E.500 a year. An officer who is compulsorily retired before completing fifteen years' service is not entitled to pension, but receives a gratuity.

OFFICIAL SOURCES OF INFORMATION.

All inquiries in connexion with medical appointments in the self-governing Dominions and their dependencies should be addressed to the High Commissioners or Agents-General for the Dominions. Intending applicants are also recommended to consult the Dominions Office and Colonial Office List, which may be seen at the Colonial Office Library or at the Library of the British Medical Association if not otherwise available, and the Professional Handbook, Part III (price 4d.), issued by the Oversea Settlement Department, Dominions Office, Caxton House, Tothill Street, London, S.W.1.

The position in Egypt is at present uncertain; questions as to the possibility of any medical appointments becoming available under the Egyptian Government should be addressed to the Director-General, Public Health Department, Cairo.

Inquiries as to vacancies and conditions in the Sudan Medical Service should be addressed in the first instance to Dr. Hodson, 24, Welbeck Street, London, W.1.

All inquiries in connexion with Colonial medical appointments made by the Secretary of State for the Colonies, or such vacancies as may occur in Iraq or Palestine, should be addressed to the Private Secretary (Appointments), Colonial Office, 2, Richmond Terrace, Whitehall, London, S.W.1.

There remain a number of medical appointments made by mining companies and other commercial undertakings in various parts of the Tropics. Much caution should be exercised in accepting such posts, and the form of contract should be subjected to very careful scrutiny. Advice in this connexion should always be sought from the Medical Secretary of the British Medical Association, British Medical Association House, Tavistock Square, London, W.C.1.

DEGREES FOR PRACTITIONERS.

AT one time it was the almost universal custom for medical students educated in London and aiming at general practice not to seek a university degree, and as that custom still prevails to a considerable extent a large proportion of medical men in England possess diplomas or licences to practise but not degrees in medicine. This is a fact which they sometimes find reason to regret, and to such practitioners the following paragraphs may be of interest. It should be noted that the M.D.Brux. diploma, if obtained since June, 1886, is not registrable in this country, and that the University of Brussels no longer holds special examinations for foreign medical practitioners. Moreover, after 1932 the University of Durham will hold no further examinations for the degree of M.D. for practitioners of fifteen years' standing.

UNIVERSITY OF DURHAM.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions, without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. Should he not have passed an examination in arts previous to the professional examination in virtue of which his name was placed on the *Register*, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from any one of the following Latin authors: Caesar, *De Bello Gallico* (first three books); Virgil, *Aeneid* (first three books); or Celsus (first three books). Natives of India or the British Colonies are placed on the same footing as natives of Great Britain, and must be registered on the books of the General Medical Council of the United Kingdom.

Professional Examination.—The candidate must pass an examination in the following subjects: (i) Principles and practice of medicine, including psychological medicine, hygiene, and therapeutics; (ii) principles and practice of surgery; (iii) midwifery and diseases of women and children; (iv) pathology, medical and surgical; (v) anatomy, medical and surgical; (vi) medical jurisprudence and toxicology. Candidates are examined by means of written papers, clinically, and viva voce at the College of Medicine, Northumberland Road, Newcastle, and in the Royal Victoria Infirmary. The classical part of the examination may be taken separately from the professional on payment of a portion (£10 10s.) of the full fee.

The examinations are held twice a year, in June and December. Notice, accompanied by the fee and certificates, must be sent to the Secretary of Examinations, at the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

Fees.—The inclusive fee for both professional and classical parts of the examination, together with the degree fee, is 50 guineas; if a candidate fail to pass, 20 guineas are retained, but if he present himself again 40 guineas only are required.

[*Note.*—It has been decided by Senate that examinations for this degree shall be discontinued after June, 1932.]

THE SWISS UNIVERSITIES.

The Universities of Lausanne and Bern have arrangements which permit British practitioners to proceed to the M.D. degree, but this alone does not confer the right to practise in Switzerland, for which the possession of the State or Federal Diploma is necessary. Neither degree nor diploma is registrable in this country.

At Lausanne the British practitioner has to produce (1) a certificate of matriculation in a British university, or of having passed a preliminary examination recognized by the General Medical Council for registration as a medical student; (2) a certificate of a degree or diploma qualifying for practice in the United Kingdom and the certificate of registration as a medical practitioner in the United Kingdom. He must then undergo a viva voce examination in three subjects of the final examination. Next he must present a thesis for the doctorate, prepared and completed in one of the Lausanne clinics under the direction of a professor of the Faculty of Medicine. Residence for a semester (October to March or April to July) is obligatory. Applications for admission should be made to the Dean of the Medical Faculty, Ecole de Médecine, Place de l'Ours, Lausanne. Dr. C. A. H. Franklin (56, Southborough Road, Bickley, Kent), honorary secretary of the Lausanne Medical Graduates, will supply further information.

SPECIAL DIPLOMAS.

INFORMATION about the regulations for the various Diplomas in Tropical Medicine, in Psychological Medicine, and in Public Health is given in the appropriate sections of this Educational Number at pages 387, 389, 391. Further details in regard to the D.P.H. and the D.T.M. will be found in Sir Andrew Balfour's *Guide to the Regulations, Courses, and Examinations for Qualifications in Public Health and Tropical Medicine*, published by the British Medical Association, Tavistock Square, W.C.1, at the price of 3s.

It should perhaps be noted here that of the various diplomas in special subjects granted by licensing bodies only those in Public Health and Sanitary Science and State Medicine are at present admissible for entry in the official *Medical Register*, though other special diplomas may, of course, be included among the particulars of qualifications set out in the *Medical Directory*.

As stated at page 361, a Diploma in Tuberculous Diseases is granted by the University of Wales to qualified medical practitioners; new regulations for this diploma are now in force.

DIPLOMAS IN MEDICAL RADIOLOGY.

Diplomas in Medical Radiology are granted by the Universities of Cambridge, Edinburgh, and Liverpool.

The Cambridge Diploma.—A Diploma in Medical Radiology and Electrology is granted by the University of Cambridge. The primary object is to provide adequate training in a branch of medical work which is becoming increasingly important and difficult, and which is outside the ordinary medical curriculum. The diploma is open only to those who hold a medical qualification approved by the Diploma Committee. Under the new regulations, which came into operation in October, 1928, the course has been extended from six to nine months. The first three months (October to December), which may be spent either in Cambridge or in London, are occupied with lectures and practical work in physics and electrotechnics, together with an introductory course in medical radiology and electrology. The work for the second three months (January to March) can be done in London only, and comprises lectures and clinical instruction in radiology and electrology given by lecturers appointed by the Educational Committee of the British Institute of Radiology, together with clinical experience in the radiological department of a hospital recognized for that purpose by the Diploma Committee. During the last three months a candidate is required to hold a clinical clerkship, or other similar appointment, in the radiological department of a recognized hospital. Hospitals at a number of provincial centres, as well as in London, have been recognized by the Committee for this purpose. In exceptional circumstances exemption from this regulation may be granted by the Committee. The examination for Part I (physics and electrotechnics) is normally taken at the end of the first three months, and the examination for Part II at the end of six months. At the conclusion of the nine months' course a candidate is required to present a thesis composed by himself. This thesis is to be in the form of a critical report, with notes upon six cases, either in radiology or electrology or in both these subjects, and must illustrate various methods of diagnosis or treatment. The course for 1930–31 begins on October 1st. Examinations for Part I will begin on January 7th and April 14th, 1931, and for Part II on April 15th, and July 15th, 1931. Further particulars of the courses and examinations can be obtained from the Secretary for the Diploma, G. Stead, M.A., Cavendish Laboratory, Cambridge, or from Dr. A. E. Barclay, Radiological Department, Medical Schools, Cambridge, or from the Secretary, British Institute of Radiology, 32, Welbeck Street, London, W.1.

The Edinburgh Diploma.—Candidates for the diploma must be graduates in medicine and surgery of the University of Edinburgh, or hold corresponding registrable degrees or qualification from some other licensing body. Candidates are not admitted to the examination for the diploma until after the lapse of not less than one year from obtaining a registrable qualification, which qualification must be registered before admission to the examination. The course of study begins in October and extends over a period of not less than three terms. The examination, which is written, oral, and practical, is in two parts: (*a*) physics, and (*b*) radiology. The examination is held twice yearly—namely, July and October. Full particulars may be obtained from the Dean of the Faculty of Medicine. In this connexion it may be noted that radiology can now be taken as the special subject in the examination for Membership of the Royal College of Physicians of Edinburgh. Several candidates have already taken radiology as their special subject; it means that an honours standard has to be attained.

The Liverpool Diploma.—The University of Liverpool grants a Diploma in Medical Radiology and Electrology. Candidates before admission to the examination for the diploma must possess a registrable qualification approved by the university in medicine and surgery, and must have attended courses of instruction in (*a*) physics (two terms); (*b*) (i) radiology and (ii) electrology, during the six months in the *x*-ray and electro-therapeutic departments of a hospital or hospitals. An examination is held in March each year, the subjects being (*a*) physics, (*b*) radiology and electrology. Examination in either part may be taken separately. Fees: tuition, £24 5s.; examination and diploma, £6 5s. A registration deposit fee of £5 5s. is charged on application and credited to the fees, but is not returnable in the event of the candidate failing to register. These courses commence during the first week in October. Application should be made to the Dean, Faculty of Medicine, the University of Liverpool.

DIPLOMA IN LARYNGOLOGY AND OTOLOGY.

The Conjoint Examining Board in England (Examination Hall, Queen Square, London, W.C.1) grants a Diploma in Laryngology and Otology (D.L.O.) after an examination held in June and December. The examination comprises two parts: Part I, on the anatomy, embryology, and physiology of the ear, nose, pharynx, larynx, trachea and bronchi, and oesophagus; Part II, on the recognition and use of special instruments and appliances, and the medicine, surgery, and pathology of these regions. Candidates may enter for Part I at any time after a registrable qualification in medicine, surgery, and midwifery has been obtained. Candidates may enter for Part II on completion of one year of special study of diseases of the ear, nose, pharynx, and larynx, after a registrable qualification has been obtained, provided that Part I has been previously passed, and on production of certain certificates. The conditions of study may be modified at the discretion of the Committee of Management in special cases. The fee for admission or readmission to each part is six guineas.

DIPLOMAS IN OPHTHALMIC MEDICINE.

A special Diploma in Ophthalmic Medicine and Surgery is granted by the University of Oxford and by the Conjoint Examining Board in England.

University of Oxford.—For the Diploma in Ophthalmology (D.O.) attendance on a twelve months' course of clinical ophthalmology in hospitals or institutions recognized for the purpose by the Board of the Faculty of Medicine, and on a course of instruction in Oxford lasting two months, is obligatory. Candidates must have their names on the *Medical Register* of the United Kingdom, unless, being Bachelors or Doctors of Medicine of universities outside the United Kingdom, they have obtained special permission from the Board of the Faculty of Medicine.

The Conjoint Board.—The Diploma in Ophthalmic Medicine and Surgery of the Conjoint Examining Board of the Royal College of Physicians of London and Royal College of Surgeons of England is issued after completion of an examination held in two parts—in January and July. The examination in each case is partly written, partly oral, partly clinical or practical. Part I comprises anatomy and embryology of the visual apparatus, physiology of vision, elementary optics; Part II comprises optical defects of the eye, ophthalmic medicine and surgery, pathology with special reference to medical and surgical ophthalmology. Candidates may enter for Part I at any time after a registrable qualification in medicine, surgery, and midwifery has been obtained. Candidates may enter for Part II on completion of one year of special study of

ophthalmology after a registrable qualification has been obtained, provided that Part I has been previously passed, and on production of certain certificates. The conditions of study may be modified at the discretion of the Committee of Management in special cases. The fee for admission or readmission to each part is six guineas.

DIPLOMAS IN OBSTETRICS.

The Society of Apothecaries of London, as stated on page 362, has now instituted a Mastery of Midwifery, and issues a diploma under this title denoting the possession of specialized knowledge of ante-natal care, midwifery, and child welfare. The diploma is, however, not registrable under the Medical Acts.

The Conjoint Examining Board in England has issued this year regulations for its new Diploma in Gynaecology and Obstetrics (D.G.O., R.C.P. & S.Eng.), the first examination for which will be held in October next, and the second in April, 1931. Those eligible for admission to examination must have held a degree in medicine and surgery recognized by the Board, or a qualification registrable in this country, for not less than three years. The subjects of the examination are gynaecology and obstetrics (including pathology, histology, and bacteriology in relation to these subjects), and ante-natal, post-natal, and infant welfare work. The examination is written, oral, and clinical, but only those candidates are admitted to the clinical who satisfy the examiners in the written and oral. A form is issued on which particulars have to be given and certified as to resident appointments in the gynaecological and obstetrical department of a recognized general hospital, in a gynaecological hospital, or a maternity hospital, or as to registrarship or clinical assistantship held in such institutions, together with particulars as to regular attendance, with responsible care of patients, at recognized ante-natal, post-natal, and infant welfare clinics during twelve months. It is added that these conditions of study may be modified in the case of a candidate who has carried out original investigations or written a thesis on some subject in gynaecology or obstetrics, or whose studies have extended over a prolonged time without fulfilling the exact conditions set out; but exemption will not be granted from any part of the examination. The fee for admission to examination or re-examination is ten guineas. Copies of the regulations for this diploma may be obtained from the Secretary, Examination Hall, Queen Square, W.C.1.

The British College of Obstetricians and Gynaecologists, founded last year, has power under its memorandum of association, either alone or in co-operation with authorized teaching and examining bodies, to grant to registered medical practitioners diplomas or other equivalent recognition of special knowledge of obstetrics and gynaecology. Diplomas granted independently by the College, however, will not of themselves confer any legal qualification to practise, and will embody a statement to the effect that they have been issued by the authority of the British College of Obstetrics and Gynaecologists alone. A report of the first general meeting of the Fellows and Members of the new College appeared in our issue of December 21st, 1929 (p. 1173).

MEDICAL MISSIONARIES.

MISSIONARY societies are in constant need of qualified men and women to fill vacancies as they occur in their hospitals, and also to enable them to take advantage of fresh openings. To those suitably endowed the mission field offers unique opportunities for interesting work, and the development of native medical schools, as training institutions in connexion with some of the larger mission hospitals, affords excellent scope for valuable work to medical men and women who are qualified to teach. It is not usually expected that medical missionaries should take a position such as would otherwise be occupied by an ordained clergyman or minister, but it is essential that they should be prepared to exert their influence in any hospital to which they may be sent so that a Christian atmosphere may be maintained and the work of evangelization be carried on through the ministry of healing.

As for scientific and other qualifications for the work, medical missionaries, in addition to being physically capable of sustaining a life which makes a great demand upon their strength, should be thoroughly well-trained physicians and surgeons. It is very desirable that they should have held a resident appointment at a general hospital, and have a good knowledge of practical surgery, gynaecology, tropical medicine, and the treatment of eye diseases. Useful information can be obtained from the secretaries of the various Missionary Societies, or from Thomas B. Adam, Honorary Secretary, Medical Advisory Board on Medical Missions to the Conference of Missionary Societies in Great Britain and Ireland, The Crossways, 45, Kenton Road, Harrow, Middlesex, or 19, Furnival Street, E.C.4.

Dental Surgery.

UNTIL the passing of the Dentists Act, 1921, the profession of dentistry in this country was regulated by enactments corresponding very closely with those relating to the practice of medicine—that is to say, there was no direct prohibition of the act of practice; and the Dentists Act of 1878 gave the same degree of protection to legally qualified and registered dentists as was accorded to registered medical practitioners—namely, the reservation of the use of certain titles. This Act provided also (1) that no person should take or use the name or title of "dentist" (either alone or in combination with any other word or words) or of "dental practitioner," or any other name, title, or description expressed in words or by letters implying that he was specially qualified to practise dentistry, unless he was registered, under a penalty of £20; and (2) that an unregistered person could not recover any fee or charge in respect of any dental operation, attendance, or advice. But, in the case of the practice of medicine by unqualified and unregistered persons, certain deterrent factors came into play—such as the inability to give a death certificate—and these did not operate to the same extent in the case of dentistry: hence, unqualified practice was far more prevalent in dentistry than in medicine, and increased after a decision of the House of Lords placing a narrow interpretation upon the words "specially qualified to practise dentistry," by defining the word "qualified" as not referring to competence but to the possession of a recognized diploma.

THE DENTISTS ACT, 1921.

This unsatisfactory position was remedied by the passing into law of the Dentists Act, 1921; its provisions are based largely on the recommendations of a departmental committee appointed in 1917 by the Privy Council "to investigate the extent and gravity of the evils connected with the practice of dentistry and dental surgery by persons not qualified under the Dentists Act." Since November 30th, 1922, no person has been permitted by law to practise or hold himself out, whether directly or by implication, as practising or as being prepared to practise dentistry unless he is on the *Dentists Register* provided for by the Dentists Act, 1878. The practice of dentistry is defined as including "the performance of any such operation and the giving of any such treatment, advice, or attendance, as is usually performed or given by dentists," and the performing of any operation or the giving of any "treatment, advice, or attendance on or to any person as preparatory to or for the purpose of or in connexion with the fitting, insertion, or fixing of artificial teeth." The maximum penalty incurred by an unregistered practitioner is £100 for each offence. There are, however, certain important exceptions to the requirement of registration. A registered medical practitioner may practise dentistry without being on the *Dentists Register*, though he may not give dental treatment to insured persons under the National Health Insurance Acts unless he be so registered, and a registered pharmaceutical chemist or chemist and druggist may extract a tooth where the case is urgent and where no doctor or dentist is available, but the operation

must be performed without any kind of anaesthetic; further, any person may carry out minor dental work in a public dental service under the personal supervision of a registered dentist provided it is in accordance with conditions approved by the Minister of Health after consultation with the Dental Board.

Dentistry may be carried on by a corporate body provided the majority of the directors and all the operating staff are registered dentists, and that no business other than dentistry or only some business ancillary to dentistry is carried on by the company. Companies carrying on the business of dentistry at the present time are permitted to continue to do so with certain restrictions, provided that the name of the company as well as the names of the directors have been entered in a list kept by the Registrar for that purpose. Every director or manager of a company convicted of an offence under the Act will be held to be guilty of the offence unless he proves that the offence was committed without his knowledge, and the court may, in addition to a fine, order that the name of any director convicted shall be removed from the list of directors aforesaid.

THE DENTAL BOARD.

On the establishment of the Dental Board in 1921 certain powers and duties of the General Medical Council were transferred to it, including the duty of erasing from the *Dentists Register* any entry which has been incorrectly or fraudulently made. An inquiry into the case of a person alleged to be liable to have his name erased from the *Register* is made by the Board, which reports its findings to the General Medical Council, the order directing the erasure being made by the Council. A name erased from the *Register* can only be restored by the Council upon a report made by the Board. An appeal to the High Court may be made by any person aggrieved either by refusal of the Board to register his name or by the removal of his name from the *Register*. The administrative expenses of the Board are defrayed from the registration fees and annual retention fees, but any surplus may be allocated to purposes connected with dental education and research or to any public purpose connected with dentistry. The office of the Dental Board is at 44, Hallam Street, London, W.1.

DENTAL EDUCATION AND EXAMINATION.

The preliminary examination in arts is the same for medical and dental students, and the early stages of their education embrace much the same subjects[1]; and, as the dental student is required to obtain a knowledge of the broad principles of medicine and surgery, it is necessary for him to pursue some portion of his studies at a medical school as well as at a special dental school, the latter not undertaking the teaching of these subjects. Registration as a dental student is not in all cases compulsory, though it is to be advised as convenient as affording proof of the commencement of professional education, and it is required by most of the licensing bodies, all of whom insist upon a curriculum covering four academic years.

Degrees and diplomas in dentistry are granted by the Universities of Belfast, Birmingham, Bristol, Dublin, Durham, Leeds, Liverpool, London, Manchester, St. Andrews, Sheffield, and the National University of Ireland, as will be found stated in the articles on these universities. Licences in dentistry entitling the holder to be registered on the *Dentists Register* are granted by the Royal Colleges of Surgeons of England, of Edinburgh, and of Ireland, and by the Royal Faculty of Physicians and Surgeons of Glasgow.

Recognized dental schools are numerous. In London there are those connected with the Royal Dental Hospital, Leicester Square; the National Dental Hospital (now the University College Hospital Dental School), Great Portland Street; Guy's Hospital; King's College Hospital; and the London Hospital. In the provinces there are the Birmingham Dental Hospital; the Royal Infirmary and the General Hospital, Bristol; the Dental Hospital, and the Public Dispensary, Leeds; the Dental Hospital, Liverpool; the Dental Hospital, Manchester; the Dental Hospital and School, Newcastle-on-Tyne; the Royal Hospital, Sheffield. In Scotland there are the Dental Hospital, Dundee; the Incorporated Dental Hospital and School, Edinburgh; and the Incorporated Dental Hospital, Glasgow; and in Ireland, the Belfast Dental School, the Incorporated Dental Hospital of Ireland, Dublin, and the Royal College of Surgeons in Ireland, Dublin.

All who think of becoming dentists may be advised to study a Memorandum, lately drawn up for their guidance by the Registrar of the Dental Board, setting out in convenient form and in untechnical language information for which request is frequently made to the Board.[1] It will be seen from this pamphlet that in order to assist suitable students the Dental Board has instituted a system of bursaries to pay the fees of those who have not the financial means to qualify, and in some cases maintenance is given as well.

[1] See the Registrar's Memorandum on Students' Registration printed in the article on the General Medical Council at page 353.

Recommendations of the General Medical Council.

The Dentists Act still leaves to the General Medical Council the duty of controlling the course of study and examinations required for dental qualifications.

The following recommendations as to the course of study and examinations to be required of candidates for degrees or licences in dentistry or dental surgery were adopted by the Council on May 27th, 1922.

Preliminary Examination and Registration.

1. That every dental student shall, at the commencement of his studentship, be registered in the manner and under the conditions prescribed for medical students.

2. That before registration in the *Dental Students Register* every applicant shall be required to have passed, in addition to the examination in general education, which shall be the same as that required for medical students, an examination in Elementary Physics and Elementary Chemistry, conducted or recognized by one of the licensing bodies, which shall also be the same as that required for medical students.

3. That before registration as a dental student every applicant shall produce evidence that he has attained the age of 17 years.

Professional Study.

4. That every candidate for a degree or licence in dentistry or dental surgery shall be required before admission to the final or qualifying examination to produce certificates showing:

(i) That he is at least 21 years of age.

(ii) That he has been registered as a dental student.

(iii) That he has, subsequently to the date of registration as a dental student, been engaged in professional study for at least four years, of which three years at least shall be spent at a school or schools recognized for professional study by one of the licensing bodies.

(iv) That, subsequently to the date of registration as a dental student, he has attended at a recognized medical school courses of instruction, which shall be the same as those required for medical students, in the following subjects: (*a*) Chemistry, and (*b*) Physics, in their application to medicine; (*c*) Elementary Biology. That he has attended at a recognized medical school courses of instruction in the following subjects: (*d*) Human Anatomy (with dissections and demonstrations) for three academic terms; (*e*) Physiology (with laboratory instruction, including Practical Histology) for two academic terms; (*f*) General Pathology (including Bacteriology) for two academic terms; (*g*) Medicine for two academic terms; (*h*) Surgery for two academic terms; (*i*) the practice of a recognized general hospital or hospitals of not less than eighty beds, with certified instruction in Clinical Medicine and Clinical Surgery, for four academic terms.

(v) That he has attended at a recognized dental school courses of instruction in the following special subjects: (*a*) Dental Anatomy and Physiology, human and comparative. The course should comprise a minimum of twenty meetings of the class. (*b*) Practical Dental Histology and Morbid Histology. The course should comprise a minimum of sixteen meetings of the class. (*c*) Dental Pathology and Surgery. The course should comprise a minimum of twenty meetings of the class. (*d*) Dental Materia Medica and Therapeutics. The course should comprise a minimum of sixteen meetings of the class. (*e*) Dental Metallurgy (with practical work and demonstrations). The course should comprise a minimum of twenty meetings of the class. (*f*) Dental Mechanics (with practical work and demonstrations). The course should comprise a minimum of twenty meetings and twenty demonstrations. (*g*) A course of instruction in the use of Anaesthetics, general and local, employed in dental practice. (*h*) A course of instruction in Radiology as applied to dentistry.

(vi) That he has for at least twenty-four calendar months attended, during the ordinary academic terms, the practice of a recognized dental hospital or of the recognized dental department of a general hospital.

(vii) That he has received for not less than twenty-four calendar months, or for 2,000 hours, practical instruction in dental mechanics.

Professional Examinations.

5. That the examination for a degree or licence in dentistry or dental surgery shall be partly written, partly oral, and partly practical, and shall include the following subjects: (*a*) Chemistry, Physics, and Biology, in their bearing on Medicine and Dentistry. (*b*) Human Anatomy and Physiology. (*c*) General Pathology, including Bacteriology. (*d*) Medicine and Surgery. (*e*) Dental Anatomy and Physiology, Dental Pathology, Dental Surgery (including Orthodontics), Dental Materia Medica and Therapeutics, and Dental Mechanics and Dental Metallurgy. (*f*) Practical Examination in Dental Surgery. (*g*) Practical Examination in Dental Mechanics and Metallurgy. (*h*) Anaesthetics, general and local, employed in dental practice.

6. That the prescribed subjects of examination may be combined or distributed at the discretion of the licensing bodies, and may be taken at two or more successive stages during the course of professional study; provided that no candidate shall be admitted to any final examination in dental surgery and dental mechanics until he shall have completed the required four years' course of study.

ACKNOWLEDGEMENT.

THE detailed information published in this Educational Number of the *British Medical Journal* for the benefit of intending students of medicine and newly qualified practitioners has been revised throughout with the co-operation of the deans and secretaries of the medical schools and kindred institutions and of officials in the several public services, to all of whom we wish to acknowledge our indebtedness.

[1] *Memorandum by the Registrar on the Procedure to be Adopted by Those who Desire to Enter the Profession of Dentistry, with Notes on Costs and Prospects.* 1929. Dental Board of the United Kingdom, 44, Hallam Street, W.1. Price 1s. post free.

THE BRITISH MEDICAL ASSOCIATION PARTY IN CANADA.

[FROM OUR SPECIAL CORRESPONDENT.]

THE main British Medical Association party *en route* for Winnipeg were welcomed on their arrival at Montreal by Dr. Bazin, President of the Canadian Medical Association, who is professor of surgery at McGill University, Montreal. The party arrived late on the evening of Saturday, August 16th, and were transferred *en bloc* to their headquarters at the Windsor Hotel, one of the enormous C.P.R. hotels which appear to be a prominent feature of most Canadian cities. Sunday was a day of rest, when many of the party attended one or other of the numerous churches of Montreal, and in the afternoon drove along the miles of its beautiful Lake Shore Drive, lined with the summer villas of Montreal townsfolk. On Monday, August 18th, an official welcome was offered to the British Medical Association at the City Hall, in a charming little oration by Mr. Bruno Charbonneau, the Pro-Mayor, on behalf of the Hon. Camilien Houde, the Mayor, who was unable to be present. Mr. Charbonneau was supported by Alderman W. S. Weldon in a very witty speech, and Professor Arthur Burgess replied on behalf of the Association. The members of the British Medical Association party then drove in procession through the city of Montreal, visiting its many points of interest, including the great Victoria Bridge across the St. Lawrence, which, with its approaches, is two miles long. At the top of Mount Royal lunch was served, the Association being the guests of the City Council. In the afternoon the party drove out to the delightful Laval sur le Lac Golf Club, where, after a pleasant afternoon in the sunshine—some members actually did golf, while others drove further into the hinterland of the Lake of the Two Mountains—dinner was held, under the chairmanship of Dr. P. Z. Rhéaume, President of l'Association des Médecins de Langue Française de l'Amérique du Nord. This was a most enjoyable function, rendered all the more so by two witty speeches, one delivered in French by Sir StClair Thomson, and the other in an amusing mixture of French, pidgin French, and English by Dr. Alfred Cox. After this, as the official programme announced, "The guests were returned to their hotel." Next morning was spent in visiting McGill University, the Royal Victoria Hospital, and the Montreal General Hospital (Osler's old hospital, senior in foundation to, but not so large as, the Royal Victoria). At McGill University the places visited by most of the party were the Osler Collection of Hearts and Aneurysms in the Pathological Museum, and the Osler Library, where Dr. Francis (the librarian, and Osler's nephew) showed the most precious items under his care, including Sir William Osler's unique and complete collection of every edition of the works of Sir Thomas Browne.

On Wednesday, August 20th, after a night in the very comfortable C.P.R. sleeper, the British Medical Association party visited Niagara Falls. The usual tourist ceremonies were all fully complied with, such as a trip on the steamer *Maid of the Mist*, down the scenic tunnel which opens behind the Falls, and over the whirlpool rapids in the aerial railway. Then the party were entertained to lunch by the Niagara Falls, Ontario, Medical Association (there is another Niagara Falls, New York State), and a welcome was extended to them by the president, Dr. Snyder, and the Mayor of the city. Then on to Toronto by steamer across Lake Ontario—Toronto, unbelievably beautiful, silhouetted against the evening sky.

UP to the night of Thursday, August 28th, the number of registrations at the Annual Meeting of the British Medical Association in Winnipeg was 3,400.

WE deeply regret to announce the death, on August 31st, after an operation, of Dr. Charles Buttar, who had been for many years a prominent member of Council and committeeman in the central work of the British Medical Association, and was a valued contributor to these columns.

WE have also to announce with much regret the death, on August 31st, from pneumonia following an operation, of Mr. Herbert W. Carson, F.R.C.S., senior surgeon to the Prince of Wales's General Hospital, Tottenham, and a Past-President of the Medical Society of London.

ON Monday next, September 8th, the day on which the Council of the League of Nations meets in Geneva, there will also be held a preliminary conference in connexion with the International Congress on African Children, to be held in Geneva in 1931. The congress, which has the support of the British and Belgian Governments and the co-operation of all the leading missionary societies, is being organized by the Save the Children International Union. The purpose of the congress is to consider the present situation in Africa with regard to infant mortality, education, marriage, and labour conditions as affecting children, with a view to comparing existing conditions with the ideals set forth in the Declaration of Geneva. Further information may be obtained from the secretary to the British Committee, 26, Gordon Street, London, W.C.1.

A PROVINCIAL meeting of the Society of Medical Officers of Health will be held at the Grand Hotel, Lowestoft, on Friday, September 19th, at 4 p.m. The subject for discussion is "The public health significance of general medical service schemes," and the speakers will include Dr. Astley Clarke, senior physician, Leicester Royal Infirmary; Dr. C. E. S. Flemming, member of Consultative Council, Ministry of Health; Dr. H. P. Newsholme, M.O.H. Birmingham; and Dr. A. M. N. Pringle, M.O.H. Ipswich. In the evening members will be entertained by the Mayor and Corporation of Lowestoft at dinner. On the following day the council of the society will meet at 10 a.m., and in the afternoon there will be a launch trip on Oulton Broad by invitation of the Eastern branch. Members who intend to be present are asked to notify the executive secretary at 1, Upper Montague Street, Russell Square, W.C.1, by an early post, in order to facilitate the local arrangements.

VACANCIES.

ALL SAINTS HOSPITAL FOR GENITO-URINARY DISEASES.—House-Surgeon (male). Salary £150 per annum.

BANGOUR MENTAL HOSPITAL, West Lothian.—Second Assistant Medical Officer. Salary £350 per annum, rising to £400.

BATH: ROYAL UNITED HOSPITAL.—Assistant House-Surgeon (male, unmarried). Salary £120 per annum.

BEDFORD COUNTY HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Males, unmarried. Salary £175 and £130 respectively.

BIRMINGHAM GENERAL HOSPITAL.—(1) Resident Anaesthetist. (2) Three House-Surgeons. Salary for (1) £120, and for (2) £70 per annum.

BOURNEMOUTH: ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House-Surgeon (male). Salary £150 per annum.

BRADFORD CITY.—Assistant Bacteriologist. Salary £600 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—Casualty House-Surgeon (male). Salary £120 per annum.

BRISTOL HOMOEOPATHIC HOSPITAL.—Resident Medical Officer. Salary £120 to £150 per annum.

BRISTOL ROYAL INFIRMARY.—Assistant for Cancer Research Laboratories. Salary £400 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—(1) House-Surgeon. (2) House-Surgeon to the Special Departments. Salary at the rate of £120 per annum each.

CANCER HOSPITAL, Fulham Road, S.W.3.—House-Surgeon. Salary at the rate of £100 per annum.

CARDIFF: KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—(1) Half-time Assistant Tuberculosis Officer for the Pontypridd Area; salary at the rate of £300 per annum. (2) Area Assistant Tuberculosis Physician; salary £600 per annum.

CARDIFF ROYAL INFIRMARY.—Gynaecological House-Surgeon. Salary at the rate of £50 per annum.

CARDIFF: UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Part-time Demonstrator in Anatomy. Honorarium £75 per annum.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.1.—Honorary Assistant Anaesthetist.

CHICHESTER: ROYAL WEST SUSSEX COUNTY HOSPITAL.—Assistant House-Surgeon. Salary £125 per annum.
DARLINGTON GENERAL HOSPITAL.—Senior and Junior House-Surgeons (males). Salary £175 and £150 per annum respectively.
DEWSBURY: THE NEW DEWSBURY AND DISTRICT GENERAL INFIRMARY.—Junior House-Surgeon. Salary £150.
DURHAM COUNTY AND SUNDERLAND EYE INFIRMARY.—Clinical Assistant in Out-patient Department. Salary £250 per annum.
GLASGOW UNIVERSITY.—Dr. Robert Pollok Lecturer in Materia Medica and Therapeutics.
GREAT YARMOUTH: GENERAL HOSPITAL.—Two House-Surgeons, Senior and Junior. Salary £150 and £140 per annum respectively.
HALIFAX ROYAL INFIRMARY.—Third House-Surgeon (male, unmarried). Salary £150 per annum.
HULL CORPORATION.—Assistant Medical Officer, Beverley Road Institution (Hospital). Salary at the rate of £300 per annum.
INVERNESS DISTRICT MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary £250 per annum.
IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—(1) Casualty Officer. (2) House-Surgeon. Males. Salary £150 and £120 per annum respectively.
LANARK COUNTY.—Bacteriologist and Pathologist. Salary £750.
LANCASHIRE COUNTY COUNCIL.—(1) Assistant County Medical Officer; salary £800 a year, rising to £1,000. (2) Senior Assistant Resident Medical Officer at the Lake Hospital and Darnton House, Ashton-under-Lyne (male, unmarried); salary at the rate of £200 per annum.
LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £150 per annum.
LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART.—House-Physician. Salary £52 per annum.
LIVERPOOL STANLEY HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Males. Salary at the rate of £100 per annum.
LONDON COUNTY COUNCIL.—Inspector of X-Ray and other Electrical Treatment Apparatus in Hospitals, etc. Salary £350 a year, rising to £400.
LONDON FEMALE LOCK HOSPITAL, 283, Harrow Road, W.9.—House-Surgeon. Salary £150 per annum.
LONDON HOSPITAL, E.1.—(1) Medical First Assistant and Registrar. (2) Surgical First Assistant and Registrar. Salary £200 per annum each.
LONDON LOCK HOSPITAL, 91, Dean Street, W.—(1) Surgical Registrar. (2) Additional Surgical Registrar. (3) House-Surgeon at Male Lock Hospital. Honorarium for (1) and (2) £100, for (3) £200 per annum.
LOWESTOFT AND NORTH SUFFOLK HOSPITAL.—Junior House-Surgeon (male). Salary £120 per annum.
MACCLESFIELD GENERAL INFIRMARY.—Resident House-Surgeon. Salary £180 per annum.
MADRAS: MEDICAL COLLEGE, Vizagapatam.—Professor of Pathology. Pay Rs.1,100 a month, rising to Rs.1,600.
MANCHESTER: ANCOATS HOSPITAL.—House-Surgeon (male). Salary £100 per annum.
MANCHESTER CITY.—Assistant Medical Officer at Baguley Sanatorium. Salary £350 per annum.
MANCHESTER ROYAL INFIRMARY.—Junior House-Surgeon and Casualty Officer (lady). Salary at the rate of £100 per annum for eight months, rising to £200 per annum.
MANCHESTER: ROYAL MANCHESTER CHILDREN'S HOSPITAL.—(1) Resident Medical Officer. (2) Resident Surgical Officer. (3) Two Assistant Medical Officers for Out-patients' Department. Salary for (1) and (2) £125 per annum, and for (3) £150 per annum.
MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—House-Surgeon. Salary £100 per annum.
MANSFIELD AND DISTRICT HOSPITAL.—House-Surgeon and Casualty Officer (male). Salary £150 per annum.
MIDDLESEX COUNTY COUNCIL.—Resident Medical Officer (male) at Hillingdon Institution, Uxbridge. Salary £600 per annum.
MID-WALES COUNTIES MENTAL HOSPITAL, Talgarth, Breconshire.—Assistant Medical Officer. Salary £350 per annum, rising to £450.
MILLER GENERAL HOSPITAL, Greenwich Road, S.E.10.—(1) Casualty Officer. (2) House-Physician. (3) House-Surgeon. Salary for (1) £150, and for (2) and (3) £125 per annum.
NATIONAL HOSPITAL, Queen Square, W.C.1.—Resident Medical Officer. Salary £200 per annum.
NOTTINGHAM CHILDREN'S HOSPITAL.—Resident House-Surgeon (woman). Salary at the rate of £150 per annum.
OLDHAM ROYAL INFIRMARY.—Two House-Surgeons. Salary £175 per annum.
PETERBOROUGH AND DISTRICT MEMORIAL HOSPITAL.—Second House-Surgeon or House-Physician. Salary £135 per annum.
PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant Pathologist. Salary £350 per annum.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.—House-Surgeon. Salary £150 per annum.
PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN, W.10.—(1) House-Surgeon and Casualty Officer. Salary £75 per annum, rising to £100 on appointment as Senior Resident. (2) Honorary Radiologist. (3) Honorary Assistant Physician (male or female).
ROTHERHAM COUNTY BOROUGH.—Resident Assistant Medical Officer. Salary £150 per annum.
ROYAL DENTAL HOSPITAL OF LONDON, 32, Leicester Square, W.C.2.—Assistant Dental Surgeon.
ROYAL EYE HOSPITAL, St. George's Circus, S.E.1.—(1) Twelve Salaried Refractionists. (2) Twelve Clinical Assistants. (3) Pathologist.
ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, Great Portland Street, W.1.—House-Surgeon (male). Salary £150 per annum.
ROYAL NORTHERN HOSPITAL, Holloway, N.7.—(1) House-Physician. (2) Resident Out-patient Casualty Officer and Anaesthetist. Salary in each case at the rate of £70 per annum.
RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—(1) Member of Honorary Medical Staff. (2) Resident House-Surgeon, salary £180 per annum.
ST. BARTHOLOMEW'S HOSPITAL, E.C.1.—(1) Assistant Surgeon to the Orthopaedic Department. (2) Assistant Surgeon for Diseases of the Throat and Nose.
ST. MARY'S HOSPITAL, W.2.—Physician in Charge of Out-patients.
ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, W.C.2.—House-Surgeon (male). Salary at the rate of £75 per annum.
ST. VINCENT'S ORTHOPAEDIC HOSPITAL, Eastcote.—Resident Medical Officer (unmarried). Salary £150 per annum.
SALFORD ROYAL HOSPITAL.—(1) House-Surgeon attached to the Orthopaedic Department. (2) House-Surgeon. Salary £125 per annum each.
SEAMEN'S HOSPITAL SOCIETY.—(1) Two House-Physicians at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C. (2) House-Physician and House-Surgeon at Dreadnought Hospital, Greenwich. (3) Medical Officer at Albert Dock Hospital. (4) House-Surgeon at Tilbury Hospital. Males. Salary for (1) and (4) £150, and for (2) and (3) £110 and a proportion of fees.
SHEFFIELD ROYAL HOSPITAL.—(1) Resident House-Surgeon. (2) Resident Anaesthetist. Males. Salary at the rate of £80 per annum, rising, after six months, to £100 per annum.
SHREWSBURY: EYE, EAR, AND THROAT HOSPITAL FOR SHROPSHIRE AND WALES.—House-Surgeon (unmarried). Salary £200 per annum.
SOMERSET COUNTY COUNCIL.—Assistant Medical Officer. Salary £600.
SOUTHAMPTON CHILDREN'S HOSPITAL AND DISPENSARY FOR WOMEN.—Resident Medical Officer (lady). Salary at the rate of £100 per annum.
SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Assistant House-Surgeon. Salary £180 per annum.
SOUTH SHIELDS: INGHAM INFIRMARY.—Junior House-Surgeon (male). Salary £150 per annum.
STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—Junior Resident Medical Officer (male). Salary £150.
STOKE-ON-TRENT: NORTH STAFFORDSHIRE ROYAL INFIRMARY.—Assistant House-Physician. Salary £125 per annum.
TYNEMOUTH COUNTY BOROUGH.—Assistant Medical Officer of Health (male). Salary £540 per annum.
UNITED SERVICES FUND: HEATHERWOOD HOSPITAL, Ascot.—Resident Assistant Medical Officer (male). Salary at the rate of £300 per annum.
VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3.—House-Surgeon. Salary at the rate of £100 per annum.
WALSALL GENERAL HOSPITAL.—House-Surgeon. Salary £150 per annum.
WEST LONDON HOSPITAL, Hammersmith Road, W.6.—(1) House-Physician. (2) Two House-Surgeons (males). (3) Resident Anaesthetist. Salary £100 per annum.
WILLESDEN URBAN DISTRICT COUNCIL.—Resident Medical Officer at the Willesden Municipal Hospital. Salary £250 per annum.
WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary £150 per annum.
WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL, S.E.18.—House-Surgeon. Honorarium £100 per annum.
WORTHING HOSPITAL.—House-Surgeon (male). Salary at the rate of £150 per annum.

CERTIFYING FACTORY SURGEON.—The appointment at St. Margaret's Hope (Orkney) is vacant. Applications to Home Office, Whitehall, S.W.1.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

British Medical Association.

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQUARE, W.C.1.

Departments.

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and Business Manager. Telegrams: Articulate Westcent, London).
MEDICAL SECRETARY (Telegrams: Medisecra Westcent, London).
EDITOR, BRITISH MEDICAL JOURNAL (Telegrams: Aitiology Westcent, London).
Telephone numbers of British Medical Association and British Medical Journal, Museum 9861, 9862, 9863, and 9864 (internal exchange, four lines).

SCOTTISH MEDICAL SECRETARY: 7, Drumsheugh Gardens, Edinburgh. (Telegrams: Associate, Edinburgh. Tel.: 24361 Edinburgh.)
IRISH MEDICAL SECRETARY: 16, South Frederick Street, Dublin. (Telegrams: Bacillus, Dublin. Tel.: 4737 Dublin.)

Diary of the Association.

SEPTEMBER.

9 Tues. West Dorset Division: Milborne St. Andrew, 3 p.m. Social Meeting.
25 Thurs. London: Insurance Acts Committee, 11.30 a.m.

DIARY OF SOCIETIES AND LECTURES.

PADDINGTON MEDICAL SOCIETY, Great Western Hotel, Paddington.—Tues., 9 p.m., Dr. E. G. Graham Little, M.P.: Address on Private or Contract Practice?

POST-GRADUATE COURSES AND LECTURES.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole Street, W.1.—*Queen's Hospital for Children*, Hackney Road, E.2: Mon. to Sat., Special Course in Diseases of Children, occupying all day, with lectures and demonstrations. Syllabus and ticket of admission from the Fellowship of Medicine.
CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.1. Fri., 4 p.m., Treatment of Chronic Nasal Discharge.
LIVERPOOL UNIVERSITY CLINICAL SCHOOL ANTE-NATAL CLINICS.—Royal Infirmary: Mon. and Thurs., 10.30 a.m. Maternity Hospital: Mon., Tues., Wed., Thurs., and Fri., 11.30 a.m.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcement of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTH.

NEILAN.—On August 23rd, 1930, to Dorothy F. Neilan (née Smith), M.B., Ch.B., D.P.H.Ed., wife of Dr. C. J. Neilan of Dawdon, Seaham Harbour, co. Durham, a daughter.

DEATHS.

MARSHALL.—Frederick William Marshall, L.R.C.P. and S., at St. John's Lodge, Pocklington, on August 23rd, aged 64 years.
SUGDEN.—On August 24th, William Allen Sugden, of 7, Hopton Road, Streatham, S.W.16.
WILKS.—On August 27th, at Milverton, Walter Road, Swansea, the residence of his sister, Morris Wilks, M.B., M.R.C.S., L.R.C.P., D.P.H., late of Birmingham, aged 58.

[The present issue being the Annual Educational Number, much current material is held over, and neither the "Supplement" nor the "Epitome of Current Medical Literature" is published this week.]

The British Medical Association:

ITS AIMS, WORK, AND CONSTITUTION.

THE British Medical Association, as stated in our introductory article on the Profession of Medicine, was founded in 1832 to promote the medical and allied sciences, to maintain the honour and interests of the profession, and to foster a feeling of friendship among its members. To attain these objects it holds periodical meetings for the discussion both of medical and scientific subjects and of professional affairs; it publishes the *British Medical Journal*; it maintains a reference and lending library; it has instituted lectures, and scholarships and grants for research. It thus concerns itself with every side of medical work—science, clinical medicine, public health, and the material interests of professional life. The British Medical Association, with a membership now exceeding 35,000, is the oldest, largest, and most powerful British organization devoted to the welfare of the medical profession. It has recently acquired a fine building in Tavistock Square, London, for its headquarters, providing ample accommodation for immediate needs and space for future developments. These premises, designed by Sir Edwin Lutyens, R.A., were formally opened in 1925 by His Majesty the King, Patron of the Association; and the beautiful wrought-iron gates erected as a memorial to the 574 members who fell in the war, by which the main quadrangle is completed, were dedicated on that occasion by the Archbishop of Canterbury. The need for larger accommodation had become insistent owing to the remarkable growth in the central work of the Association during recent years, which had far outstripped the capacity of the premises in the Strand. Further extensions to the building in Tavistock Square have now been completed.

British Medical Association House: Court of Honour.

Constitution and Administration.

The Association has Branches and Divisions throughout Great Britain and Ireland, and also in the Dominions, Colonies, and Dependencies. The Divisions are arranged territorially, and number, in all, 252. For certain purposes of administration or of scientific and clinical work, the Divisions are combined into 97 Branches. Members of Divisions elect representatives on the Branch Councils and also a member or members of the Representative Body, which is the governing body of the Association and determines its policy.

The Council is the executive of the Association. It is elected partly by the Divisions and Branches and partly by the Representative Body, and includes representatives of the Navy, Air Force, Army, and Indian Medical Services elected by the Representative Body. The Representative Body and Council elect standing committees to take charge of different subjects. Among these may be mentioned the Science, Medico-Political, Ethical, Hospitals, Public Health, and Naval and Military Committees. There are Committees also for the Dominions, Scotland, Ireland, and Wales; and for the working machinery of the Association, such as the Organization, Finance, and Journal Committees. The Insurance Acts Committee, elected partly by the Association and partly by insurance medical practitioners, is financed by the Association; it is the recognized executive and mouthpiece of the insurance practitioners of Great Britain.

Privileges of Members.

A member of the Association has the right—

1. To attend the annual and other general meetings of the Association and the meetings of the Division and Branch to which he or she belongs.
2. To take part by personal vote (or in some Divisions by voting paper) in the election of the representative of his or her Division in the Representative Body, and also in the election of members of the Council.
3. To receive by post the *British Medical Journal*, published weekly, which gives a full record, with commentary, of progress in clinical and scientific medicine and of medico-political affairs throughout the British Empire.
4. To receive the help and advice of the central office in any professional difficulty.
5. To use the Library as a reading room, and to borrow current medical or scientific books on payment of postage. Besides modern works and periodical medical literature—foreign as well as English—the library contains many books of historic interest.

The full benefits of the Association can only be secured by the co-operation of large numbers of the medical profession, for the greater the membership and the funds the more efficient and influential the organization. The Association during the past ninety-seven years has been the direct means of benefiting every class of medical men and medical women. In asking for new members it looks not only to the older practitioners but also and especially to those recently qualified. To these a generous concession is made as regards subscription, and there is a special claim to their recognition of the work of the Association in improving the conditions under which they may hold appointments in the public services or in civil life. The Association's work for the Services is well known. It feels a special responsibility towards those members of the profession who by reason of their position are precluded from taking common action, and recent events have proved again its capacity to further their interests.

Subscriptions and Applications for Membership.

The ordinary subscription to the British Medical Association is 3 guineas a year for members resident in the British Isles, but this is subject to various exceptions. Thus, newly qualified practitioners elected within two years of registration pay half this sum up to the end of the fourth year after registration; medical officers on the active list of the R.N., R.A.F., R.A.M.C. (Regular), and I.M.S. pay 2 guineas; concessions are made also to members (in the British Isles) of forty years' standing, to members of ten years' standing who have retired from practice, to medical married couples residing together, and to whole-time teachers and research workers. The ordinary subscription for members living abroad is 1½ guineas, but some Branches have special local subscriptions. A member elected after June 30th pays half the subscription for that year.

All duly qualified British medical practitioners are eligible for election. Full particulars can be obtained from the Medical Secretary, British Medical Association House, Tavistock Square, London, W.C.1; the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh; or the Irish Medical Secretary, 16, South Frederick Street, Dublin.

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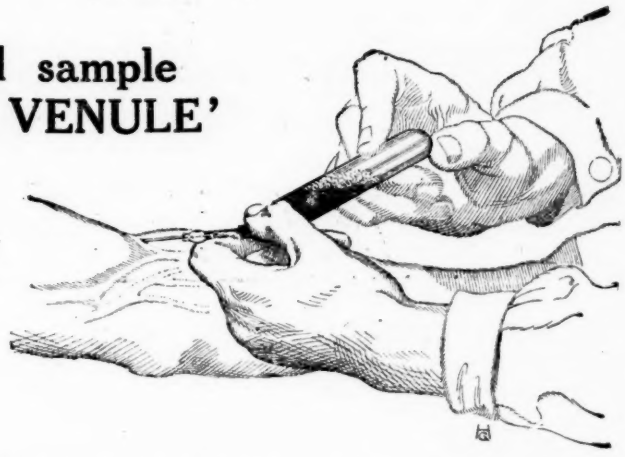

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